



FACTS AND FIGURES
of the
AUTOMOBILE INDUSTRY

1922

**NATIONAL AUTOMOBILE
CHAMBER OF COMMERCE**

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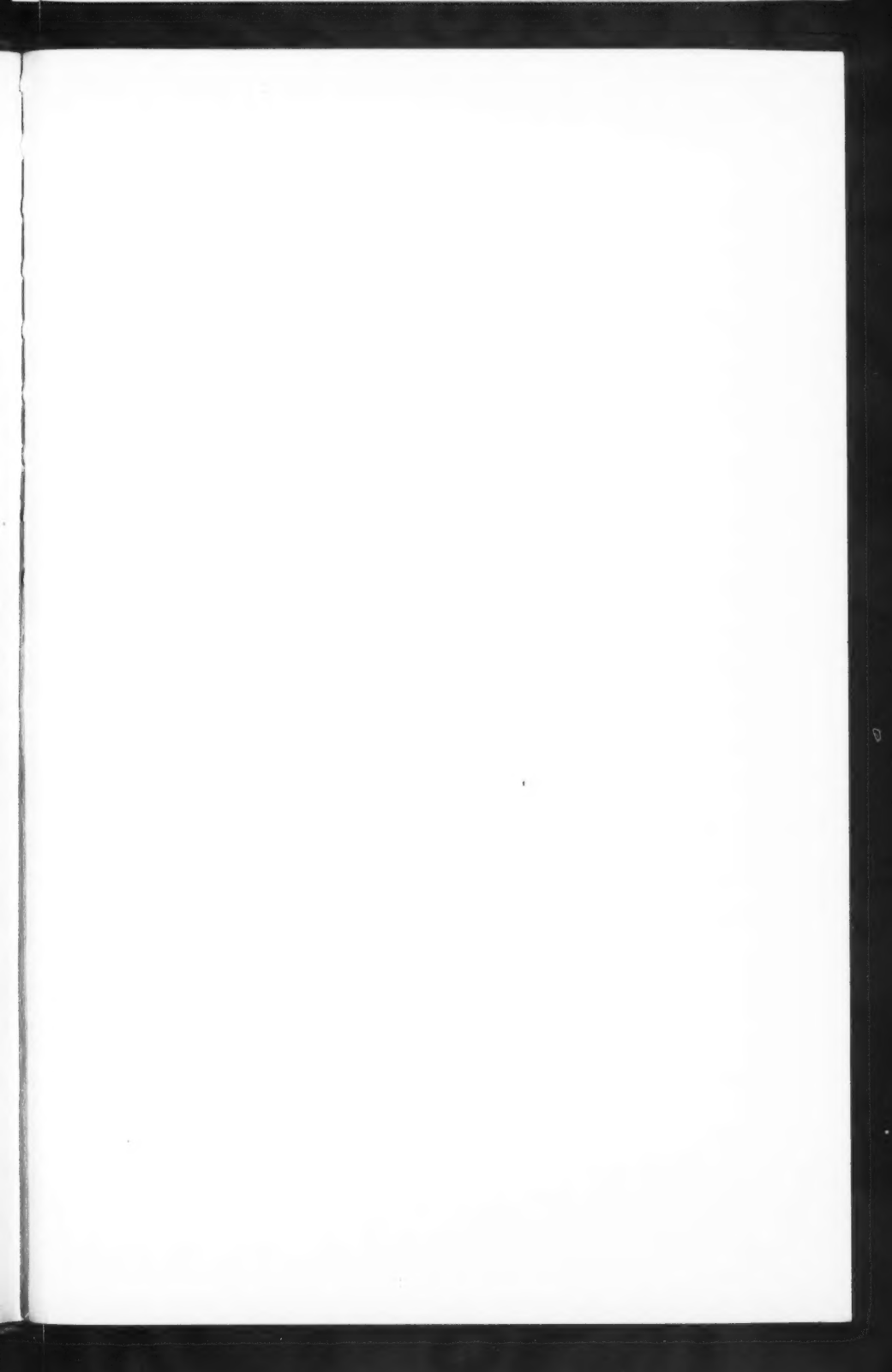
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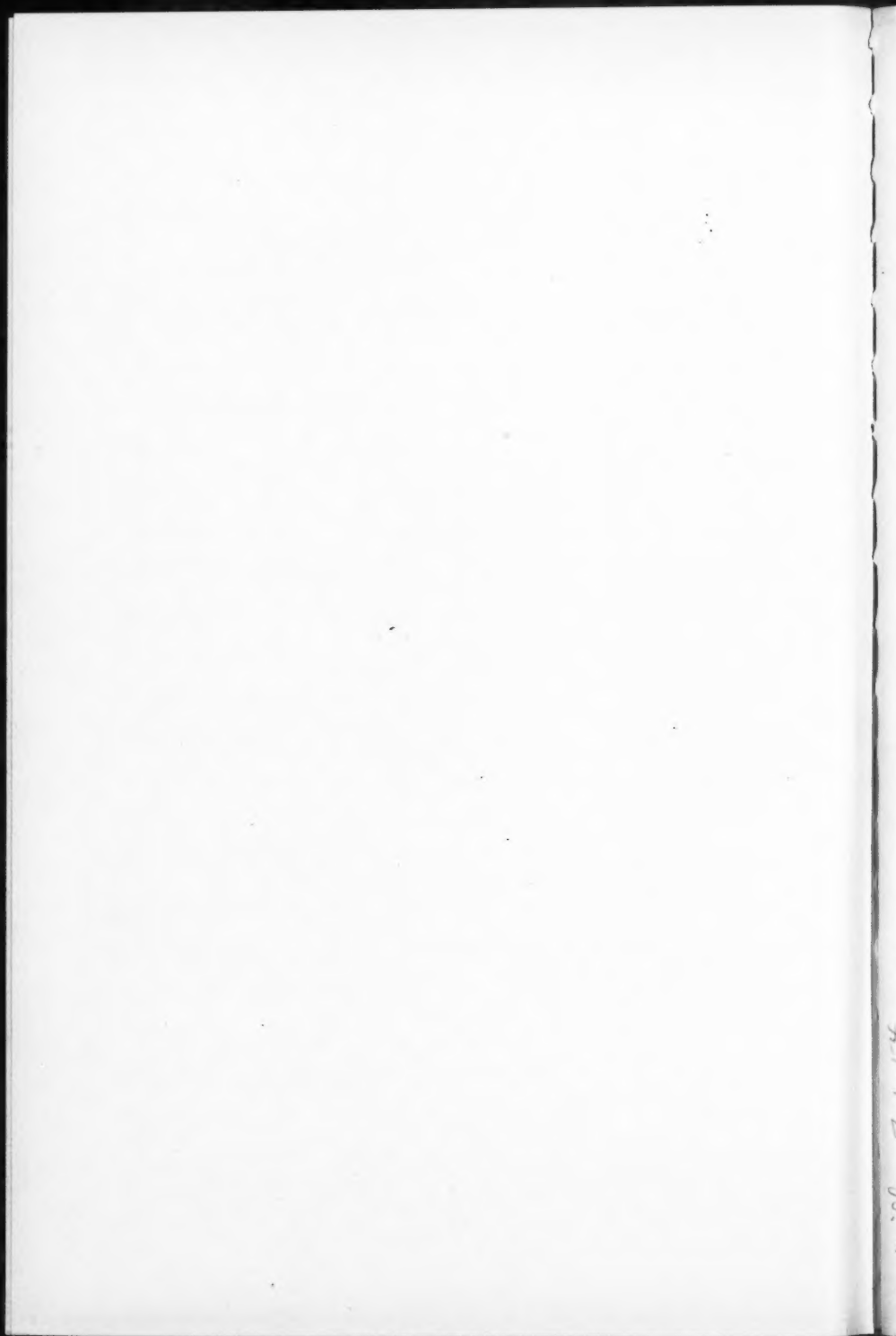
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Introduction

Motor transportation attained a new record of usefulness to the public in 1921.

Registration of motor cars and motor trucks reached 10,448,000, a gain of 13% over 1920.

The need for motor transportation in adverse times such as 1921, as well as in times of prosperity, is emphasized by the fact that gasoline consumption during the past twelve months was 250,000,000 gallons greater than in the preceding year.

Construction of federal aid highways during 1921 was more than 12,000 miles, a total equal to the program of the four preceding years, affording more efficiency and more economical use for vehicular traffic.

Facts and Figures of the Automobile Industry aims to give each year the outstanding facts concerning the motor car and motor truck as they relate to the general public, to the trade and to the manufacturer.

Through extensive research by the U. S. Government, by states, by private agencies and by the National Automobile Chamber of Commerce, a large amount of new material on the economic status of motor transportation is available for this edition of *Facts and Figures*.

A table of contents by general subjects is on the inside cover and a detailed index is given in the concluding pages of the book.

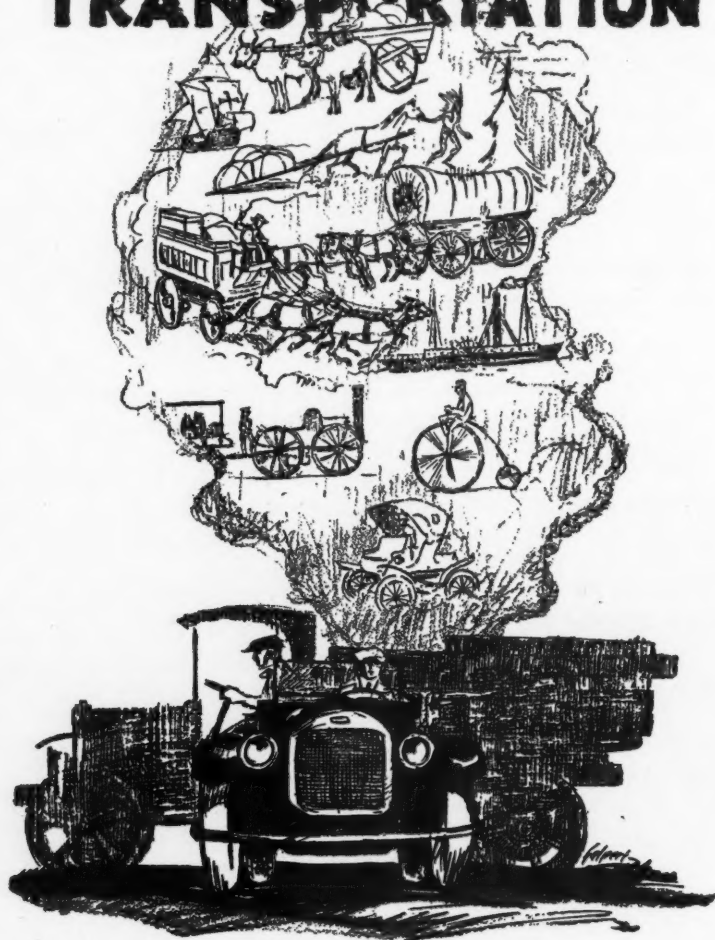
NATIONAL AUTOMOBILE CHAMBER OF COMMERCE, INC.

Marlin-Rockwell Building

366 Madison Avenue at 46th Street, New York City

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IN THE FOREFRONT OF TRANSPORTATION



With a total of 10,448,000 cars and trucks in the United States during 1921, the motor vehicle completed the greatest transportation year in its history. Motor cars during the twelve months carried 6,990,000,000 passengers and motor trucks hauled 1,450,000,000 tons of freight,

1921

10,448,632 Cars and Trucks in U.S.A.

Gain of 13% Over 1920

Motor Vehicles Produced 1,668,550

Number cars.....	1,514,000
Number trucks.....	154,550
Per cent decrease from 1920...	24%

Wholesale Value 1921 Output \$2,212,068,420

Value complete car and truck output.....	\$1,260,000,000
Value of parts and accessories output.....	409,710,000
Value of tire replacements....	542,358,420

Motor Vehicle Mfg. Business:

Capital invested.....	\$1,423,500,000
Cost of material bought.....	1,058,230,000
Number of employees.....	186,000
Wages and salaries.....	299,098,780

Tire and Fuel Figures:

Gasoline produced, gallons....	5,153,549,318
Gasoline consumed, gallons....	4,516,012,979
Tire casings produced.....	27,275,000

Motor Car Statistics 1921

Total Output **1,514,000**

Open cars.....	1,179,000
Closed.....	335,000
Per cent of closed cars in total output.....	22.1%
Wholesale value of cars produced.....	\$1,093,918,000
Per cent of output exported.....	2%

Number of Passenger Cars in U. S. 9,321,150

Largest state user, California.....	645,522
State having biggest per cent gain, Massachusetts.....	37%
Per cent owned by farmers.....	30%

Size of Passenger Car Mfg. Business:

Capital invested.....	\$1,134,166,000
Number of factories.....	177
Value of repair parts business....\$	137,127,000

Retail Passenger Car Business:

Dealers.....	13,452
Garages.....	43,582
Repair Shops.....	57,397
Charging Stations.....	4,248

Motor Truck Figures 1921

Total Production **154,550**

Wholesale value of output.....\$166,082,000

Commercial Vehicle Registration **1,127,482**

Number of states registering
trucks separately..... 41

Largest state user, New York.... 148,553

Trucks on farms..... 150,000

Motorized express companies in
U. S. A..... 1,500

Size of Truck Mfg. Business:

Capital invested.....\$289,334,000

Value of parts sold..... 36,014,800

Number of factories..... 230

Truck Dealers **2,522**

Annual Production of Motor Vehicles

PASSENGER AND COMMERCIAL COMBINED

Year	Number	Wholesale Value	Year	Number	Wholesale Value
*1899.....	3,700	\$4,750,000	1912.....	378,000	\$378,000,000
1903.....	11,000	12,650,000	1913.....	485,000	425,000,000
*1904.....	21,975	30,864,616	*1914.....	569,045	458,957,843
1905.....	25,000	40,000,000	1915.....	892,618	691,778,950
1906.....	34,000	62,900,000	1916.....	1,583,617	954,969,353
1907.....	44,000	93,400,000	†1917.....	1,868,947	1,274,488,449
1908.....	65,000	137,800,000	†1918.....	1,153,637	1,236,106,917
*1909.....	127,731	165,148,529	1919.....	1,974,016	1,885,112,546
1910.....	187,000	225,000,000	1920.....	2,205,197	2,232,927,628
1911.....	210,000	262,500,000	1921.....	1,668,550	1,260,000,000

PASSENGER CARS

*1899.....	3,700	\$4,750,000
*1904.....	21,281	23,634,367
*1909.....	127,731	159,918,506
1910.....	181,000	213,000,000
1911.....	199,319	240,770,000
1912.....	356,000	335,000,000
1913.....	461,500	399,902,000
*1914.....	543,679	413,859,379
1915.....	818,618	565,978,950
1916.....	1,493,617	797,469,353
†1917.....	1,740,792	1,053,505,781
†1918.....	926,388	801,937,925
1919.....	1,657,652	1,461,785,925
1920.....	1,883,158	1,809,170,963
1921.....	1,514,000	1,093,918,000

MOTOR TRUCKS

*1904.....	411	\$946,947
*1909.....	3,255	5,230,023
1903to 1910	10,374	20,485,500
1911.....	10,655	22,292,321
1912.....	22,000	43,000,000
1913.....	23,500	44,000,000
*1914.....	25,375	45,098,464
1915.....	74,000	125,800,000
1916.....	90,000	157,500,000
†1917.....	128,157	220,982,668
†1918.....	227,250	434,168,992
1919.....	316,364	423,326,621
1920.....	322,039	423,756,715
1921.....	154,550	166,082,000

*From U. S. Census reports.

†Production figures compiled by Automotive Products Section, War Industries Board, from sworn statements by manufacturers.

1921 Truck Production By Capacities

Size	Number	Per Cent	Size	Number	Per Cent
¾-Ton or less.....	33,809	21.9%	3½-Ton.....	3,343	2.2%
1-Ton.....	79,844	51.6%	5-Ton.....	9,714	6.3%
1½-Ton.....	7,076	4.6%	Over 5-Ton.....	3,600	2.3%
2-Ton.....	13,206	8.5%	Total.....	154,550	100%
2½-Ton.....	3,958	2.6%			

1921 Tire Production

Tire Casings produced.....	27,275,000*
Inner tubes produced.....	33,878,000*
Solid tires produced.....	529,705*
Crude rubber consumed in 1921 tire production, pounds.....	379,000,000†

*Estimated from figures compiled by the Rubber Association of America considering their figures as representing 80% of the total.

†From questionnaires sent out by the Rubber Association, the results of which represented about 90% of the total crude rubber consumed in the production of tires.

1921 Volume of Motor Transportation Compared with Steam Railroads

Passengers Carried

Motor cars.....	6,990,862,000
Railroads.....	1,034,315,000

Passenger Mileage

Motor cars.....	70,820,000,000
Railroads.....	37,329,114,000

Tonnage Carried

Motor trucks.....	1,430,000,000
Railroads.....	1,642,251,000

Ton Mileage

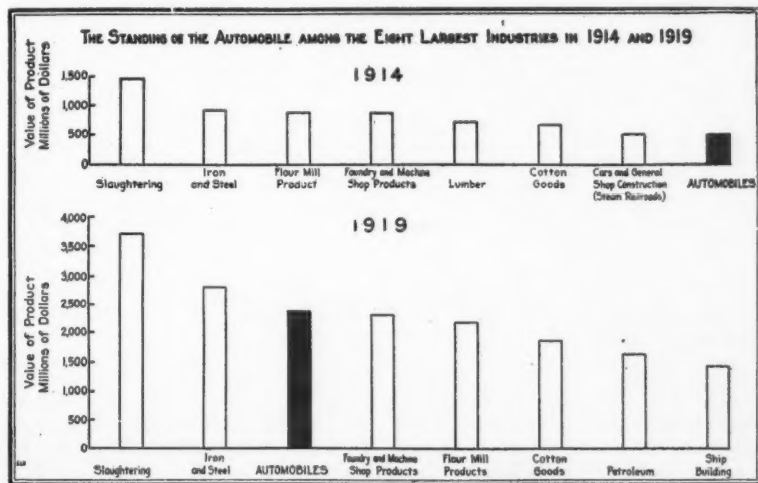
Motor trucks.....	6,479,200,000
Railroads.....	306,755,332,000

Railroad figures from Interstate Commerce Commission.

Motor car passengers carried figures estimated on basis of 9,321,150 passenger car registration, 2.5 average number passengers carried per car, average 300 days use of car per year; the average day's use allows for those sections where roads are impassable three or four months in the year.

Other motor car and motor truck figures from U. S. Bureau of Public Roads.

Electric railways carry the largest number of passengers annually with a total of 13,000,000,000 cash and 3,000,000,000 transfer passengers.



"From "Motor

Motor Industry a Leading Railroad Customer

Commodity statistics of the Interstate Commerce Commission show that the shipping of passenger automobiles, motor trucks and parts ranks **THIRD** in 1920 and **FOURTH** in 1921 in the number of carloads of manufactured articles. The leading industries are:

Industry	Carloads		Industry	Carloads	
	1920	1921		1920	1921
Refined petroleum and its products.....	1,070,216	983,264	Chemicals and explosives.....	268,721	185,168
Bar and sheet iron, structural iron, and iron pipe.....	778,699	430,558	Sugar, Syrup, Glucose and Molasses.....	195,982	172,246
Cement.....	404,026	417,489	Lime and Plaster....	153,446	150,022
Automobiles, Motor Trucks and Parts except Tires and Chains.....	447,675	359,472	Iron, Pig and Bloom..	358,854	122,879
Brick and Artificial Stone.....	428,907	319,309	Canned Goods (all canned food products).....	124,311	113,556
Fertilizers (all kinds).	368,724	261,473	Agricultural Implements and vehicles other than automobiles.....	226,885	110,078
Castings, machinery and boilers.....	410,097	205,270			

Railroad Freight Car Load Shipments from Automobile Factories

Year	1915	1916	1917	1918	1919	1920	1921
January.....	9,069	21,202	23,292	11,528	17,039	25,057	6,485
February.....	11,973	23,581	22,385	12,030	19,152	25,505	9,986
March.....	17,192	29,622	29,443	16,728	23,744	29,326	16,287
April.....	18,912	27,689	27,700	17,797	25,267	17,147	20,187
May.....	15,392	25,120	26,451	17,833	24,497	21,977	18,608
June.....	17,075	24,558	21,524	15,869	22,196	22,516	20,269
July.....	14,317	18,451	19,993	13,741	24,897	23,082	19,514
August.....	16,959	21,237	22,044	13,868	22,677	23,386	20,758
September.....	18,940	22,089	20,538	10,879	24,711	20,804	19,002
October.....	17,848	19,876	21,403	10,667	29,843	17,209	17,808
November.....	17,138	18,169	18,942	9,254	26,690	13,253	14,264
December.....	17,760	19,580	15,827	11,258	24,004	11,802	12,310
*Total.....	192,575	271,174	269,542	161,470	284,717	251,064	195,478

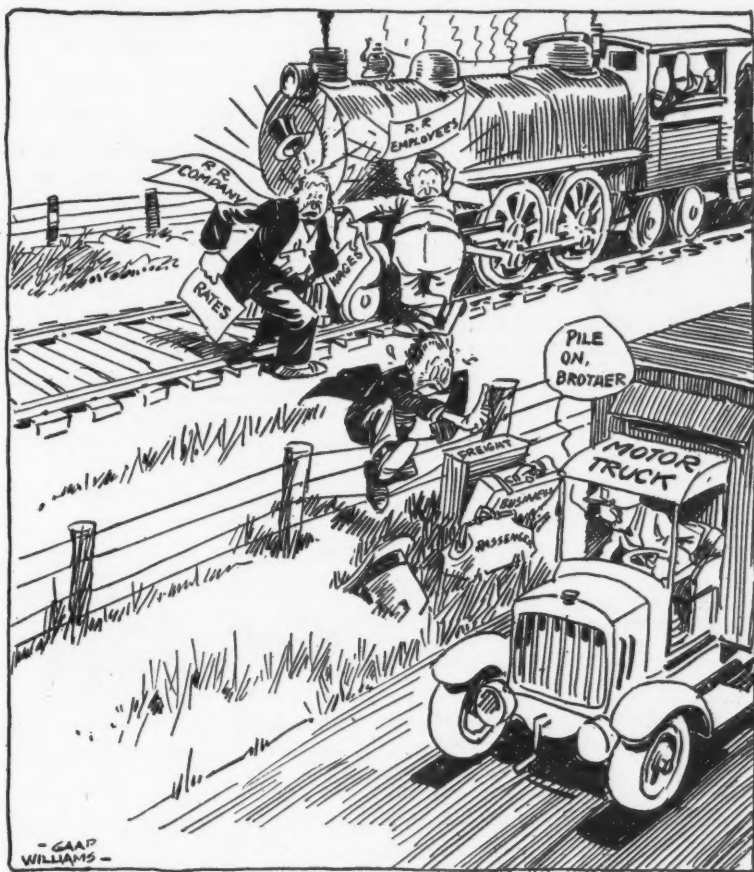
*Motor cars and motor trucks were driven overland from the factories to the number of 470,867 in 1920 and 144,446 in 1921. Shipments by boat amounted to 32,883 machines in 1920 and 22,310 machines in 1921.

C. L. Bardo, Gen. Mgr., New York, New Haven & Hartford Railroad, says:

"The industrial development of America has outstripped its rail transportation facilities to such an extent that we are face to face today with a serious economic transportation question. I am

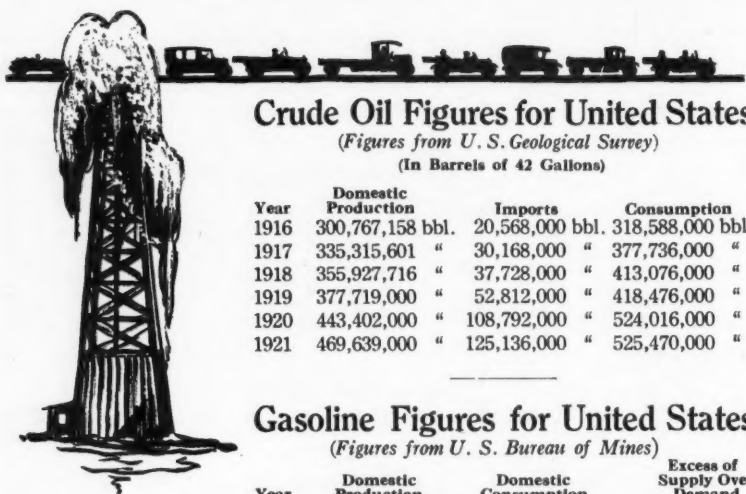
inclined to believe that the conclusion reached as to the handling of short-haul l. c. l. traffic by motor truck and long-haul bulk l. c. l. traffic by rail is the correct step."

SOMEBODY WILL GIVE US A LIFT



Courtesy of Indianapolis News

Surveys during the threatened railroad strike of October 1921 showed that in motor cars and trucks the public has protection in the event of a transportation emergency. In October 1921 the N. A. C. C. listed 984 motor truck transport companies engaged in inter-city work. It was also shown that there are enough automobiles within a 40-mile radius of the seven largest cities to care for transporting the suburban residents to business if the need arises: Suburban district of New York 221,645 cars, or one to every 14.6 persons; Chicago 100,826 cars, 1 to 10.4 persons; Philadelphia 75,474 cars, 1 to 13.3 persons; Detroit 40,000 cars, 1 to 9.9 persons; Cleveland 56,370 cars, 1 to 11 persons; St. Louis, 30,982 cars, 1 to 14.4 persons; Boston, 120,200 cars, 1 to 13.8 persons.



Crude Oil Figures for United States

(Figures from U. S. Geological Survey)

(In Barrels of 42 Gallons)

Year	Domestic Production	Imports	Consumption
1916	300,767,158 bbl.	20,568,000 bbl.	318,588,000 bbl.
1917	335,315,601 "	30,168,000 "	377,736,000 "
1918	355,927,716 "	37,728,000 "	413,076,000 "
1919	377,719,000 "	52,812,000 "	418,476,000 "
1920	443,402,000 "	108,792,000 "	524,016,000 "
1921	469,639,000 "	125,136,000 "	525,470,000 "

Gasoline Figures for United States

(Figures from U. S. Bureau of Mines)

Year	Domestic Production	Domestic Consumption	Excess of Supply Over Demand
1918	3,570,312,963 gal.	3,129,509,872 gal.	440,803,091
1919	3,957,857,097 "	3,434,810,726 "	523,046,371
1920	4,882,546,699 "	4,256,427,955 "	626,118,694
1921	5,153,549,318 "	4,516,012,979 "	637,536,339

Oil Resources of the World

(Estimated by U. S. Geological Survey)

Eastern Hemisphere.....	21,250,000,000 bbl.
Probable undiscovered.....	20,000,000,000 "
South America.....	9,250,000,000 "
United States.....	7,000,000,000 "
Mexico.....	4,500,000,000 "
Canada.....	1,000,000,000 "

Enough to supply the needs of the United States at the present rate of consumption for over 100 years.

Automobile Industry Activity Affects 2,431,400 Workers

(From New York Herald, Feb. 26, 1922.)

Professional chauffeurs and drivers.....	1,200,000	Tannery workers.....	8,000
Motor vehicle factory workers.....	256,000	Textile and leather men.....	15,000
Motor vehicle salesmen.....	106,000	Oil refinery employees.....	51,000
Accessory factory workers.....	250,000	Paper composition workers....	5,400
Garage employees.....	236,000	Total*	2,431,400
Tire factory workers.....	73,000		
Tire dealers and salesmen.....	150,000		
Iron and steel workers.....	33,000		
Aluminum workers.....	5,000		
Copper, brass and tin workers.....	3,000		
Woodworkers.....	20,000		
Plate glass factory employees..	21,000		

*Figures for the various industries are based on per cent of total output consumed by automobile industry. Total does not include glue and curled hair factory employees, as figures are not available for these classifications, nor does it include timber fellers, cattle raisers, and others employed in producing the primary materials.

Raw Materials Consumed in Manufacturing Motor Cars and Trucks, 1921

Iron and Steel, tons.....	1,464,000
Production of iron and steel, 1921 (Iron Age).....	36,150,000
Per cent used in mfg. cars and trucks.....	4%
Aluminum, pounds.....	43,250,000
Production of aluminum, 1920 (Amer. Metal Mkt.)..	198,000,000
Per cent used in mfg. cars and trucks.....	22%
Copper, pounds.....	83,425,000
Production of copper, 1921 (Survey of Current Business).....	510,000,000
Per cent used in mfg. cars and trucks.....	16%
Tin, tons.....	12,510
Total consumption of tin, 1921 (Amer. Metal Mkt.)...	60,000
Per cent used in mfg. cars and trucks.....	20%
Lead, tons.....	6,670
Production of lead, 1921 (Amer. Metal Market).....	390,000
Per cent used in mfg. cars and trucks.....	1.7%
Nickel, pounds.....	3,400,000
Leather, upholstering, square feet.....	37,165,000
Total production of upholstering leather, 1921, estimated by the Tanner's Council at 54,000,000 square feet, but of which only 35,000,000 square feet was suitable for upholstering automobiles.	
Upholstering cloth, yards.....	5,357,000
Imitation leather, square feet.....	88,400,000
Lumber used in mfg. cars and trucks, feet.....	313,800,000
Glass (mostly plate glass), square feet.....	16,500,000
Production of plate glass, 1921, approximately.....	55,000,000
Per cent used in mfg. cars and trucks.....	30%
Top and side curtain material, yards.....	15,330,000
Hair and padding, pounds.....	16,000,000
Paint and Varnish, gallons.....	5,900,000

Professional and Business Use of Motor Cars

(Motor cars are being used increasingly by business houses for salesmen, supervisors, and to save the time of the executives. A checking of 6,000 Massachusetts license plates taken in order of registration shows 9% of passenger cars owned by businesses. This does not include the business mileage of cars owned by individuals which is shown by surveys to be 60% of the total.)

The National Automobile Chamber of Commerce sent 1,000 letters to each of the following classifications: oil companies, chain stores, hospitals, construction companies, laundries, universities, churches. Averages of the replies received to date are given below and give an indication of the extent of motor car use.)

105 OIL COMPANIES USE 4,000 CARS

One hundred and five oil companies in various sections of the United States use 4,000 motor cars. The most frequent use is for supervision and sales among leading users are as follows:

Standard Oil Co. of California.....	1,167	Transcontinental Oil.....	65
Standard Oil Co. of Louisville.....	600	Louisiana Oil Ref. Co.....	50
Union Oil Co. of California.....	497	White Eagle Oil & Ref. Co., Kansas	
Empire Gas and Fuel Co.....	350	City, Mo.....	40
Shell Co., California.....	150	Constantin Ref. Co.....	32
Roxana-Petroleum Corp.....	116	Panhandle Ref. Co.....	29

CHAIN STORES

Of 91 chain stores reporting, 64% use motor cars.

LAUNDRIES

Of 271 laundries surveyed, 56% own motor cars. Ten laundries report ownership of 20 or more cars each.

CONSTRUCTION COMPANIES

79% of the 202 construction companies reporting are users of motor cars.

HOSPITALS

Of 120 hospitals surveyed 100% own one or more motor vehicles, 86% own passenger cars.

COLLEGES

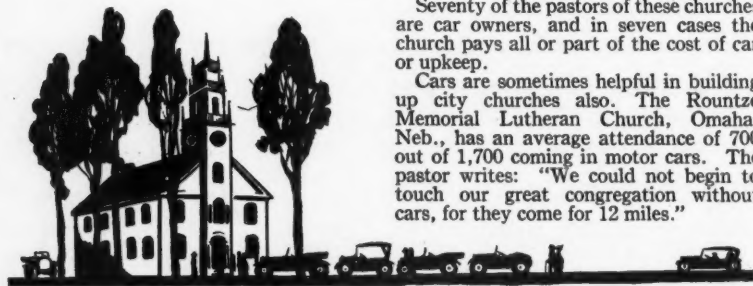
Motor cars are owned by 84 universities and colleges of the country, and motor trucks by 89. Motor vehicles are used in this connection for extension lectures, travelling libraries, and general hauling. Among the leading educational institutions using motor vehicles are: Amherst, Cornell, Carnegie Institute of Technology, Massachusetts Institute of Technology, Illinois, Smith, Stanford, Wellesley, Williams.

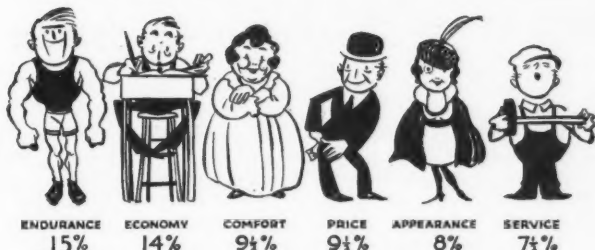
CHURCHES

In many communities, especially rural sections, the motor car is an aid in church work. A recent survey of 140 rural churches taken at random from five different denominations shows that of an average attendance of 110, 30 of the congregation come in motor cars. In many sections the percentage is much higher.

Seventy of the pastors of these churches are car owners, and in seven cases the church pays all or part of the cost of car or upkeep.

Cars are sometimes helpful in building up city churches also. The Rountze Memorial Lutheran Church, Omaha, Neb., has an average attendance of 700 out of 1,700 coming in motor cars. The pastor writes: "We could not begin to touch our great congregation without cars, for they come for 12 miles."





What the Public Wants

Results from a survey of 20,000 car owners by the National Automobile Chamber of Commerce show that the essential qualities of endurance and economy are uppermost in the public mind when buying a car. Each owner was asked to name the quality which appealed to him most in purchasing a car. The vote showed the following ranking:

Vote on Car Qualities

Endurance.....	15%	Hill Climbing.....	7%
Economy of operation.....	14%	Flexibility.....	6½%
Comfort.....	9½%	Endorsements (opinion of other owners).....	6½%
Price.....	9½%	Specifications.....	6%
Appearance.....	8%	Speed.....	5½%
Service (good local repair shops).....	7½%	Appointments.....	5%

Automobile Business in Rochester, N. Y.

Locally invested capital.....	\$5,753,200
Automobile Dealers.....	3,795,100
Accessory Dealers.....	1,958,100
Persons employed by dealers..	1,554
Number automobiles exhibiting at show.....	38
Number accessory dealers exhibiting at show.....	35

—Rochester Herald

Civic Plans for Motor Traffic

Many cities are planning better parking and traffic systems to accommodate the volume of motor vehicle business which has developed within the past few years and is expected to increase.

Dr. John A. Harris, Special Deputy Police Commissioner of New York, has proposed tunneling under the parks to provide parking space for 34,000 vehicles.

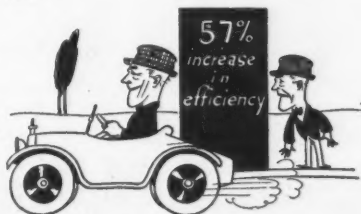
Indianapolis is to have a four story "automobile hotel" under private management, which can accommodate 400 cars.

57% More Efficient

(The average of replies to questionnaires sent by the National Automobile Chamber of Commerce to thousands of car owners is the basis for the following figures on car use.)

Added efficiency due to car use.....	57%
Mileage used for business*.....	60%
Per cent of cars used more or less for business*.....	90%
Per cent of mileage used where there is no other adequate transportation.....	34%

*Does not include non-commercial utility such as time-saving outside of business, healthful recreation.



Motor Vehicle Survey of 60 Municipalities

(New York State Bureau of Municipal Information)

(Reports from a 1921 survey of 60 out of the 100 largest cities in the United States show that over 6,000 motor vehicles are owned and operated by these cities for municipal purposes. This total does not include fire apparatus or privately owned cars of which city pays operating charges.)

City	No. of motor trucks	No. of passenger cars	Total No. of motor vehicles*	City	No. of motor trucks	No. of passenger cars	Total No. of motor vehicles*
Albany, N. Y.	17	18	37	Rockford, Ill.	17	8	31
Altoona, Pa.	13	8	23	St. Louis, Mo.	51	144	252
Atlantic City, N. J.	8	5	22	St. Paul, Minn.	28	32	67
Bayonne, N. J.	4	12	27	San Diego, Cal.	29	21	55
Binghamton, N. Y.	10	12	28	San Francisco, Cal.	not given	115	not given
Buffalo, N. Y.	71	89	213	Schenectady, N. Y.	12	13	34
Chicago, Ill.	97	88	298	Seattle, Wash.	86	142	253
Cincinnati, O.	27	69	97	South Bend, Ind.	4	7	18
Dayton, O.	26	55	84	Springfield, Mass.	36	55	101
Denver, Col.	60	37	141	Tacoma, Wash.	not given	...	...
Detroit, Mich.	200	293	598A	Tampa, Fla.	11	20	40
Duluth, Mich.	8	12	27	Toledo, O.	21	56	99
El Paso, Tex.	39	27	75B	Trenton, N. J.	20	21	53
Erie, Pa.	16	7	31	Troy, N. Y.	4	4	15
Flint, Mich.	54	34	96	Utica, N. Y.	4	9	20
Hartford, Conn.	17	27	59	Washington, D. C.	107	57	217
Hoboken, N. J.	...	3	14	Wichita, Kan.	5	16	25
Jacksonville, Fla.	42	32	87	Wilkes-Barre, Pa.	...	2	1
Lawrence, Mass.	21	16	42	Wilmington, Del.	9	19	36
Los Angeles, Cal.	36	110	170C	Worcester, Mass.	47	28	84
Lowell, Mass.	7	13	28	Yonkers, N. Y.	9	17	57
Manchester, N. H.	22	16	44				
Minneapolis, Minn.	...	68	68D				
Mobile, Ala.	5	12	23				
Nashville, Tenn.	31	32	74				
New Britain, Conn.	10	5	16				
New Haven, Conn.	7	20	36				
Newark, N. J.	42	83	182				
Norfolk, Va.	19	45	87				
New York City, N. Y.	520	326	1,149				
Oakland, Cal.	25	69	99				
Passaic, N. J.	2	4	12				
Pawtucket, R. I.	15	...	24				
Peoria, Ill.	2	10	16				
Pittsburgh, Pa.	55	55	161				
Portland, Ore.	42	75	153				
Providence, R. I.	24	31	56				
Pueblo, Colo.	9	9	20				
Reading, Pa.	8	16	28				
Rochester, N. Y.	46	55	102				

*Including 225 police patrols, 135 ambulances, 743 motor cycles.

A. Includes 10 tractors and 21 passenger buses.

B. Does not include 10 personally owned cars for which the city pays a small rental and supplies gasoline, oil and tires.

C. Does not include cars used by Board of Public Service. There are also 168 privately owned cars on which city allows mileage of 7c per mile.

D. 41 cars are owned by individual officials, city pays towards maintenance.

U. S. Has Motorized Schools

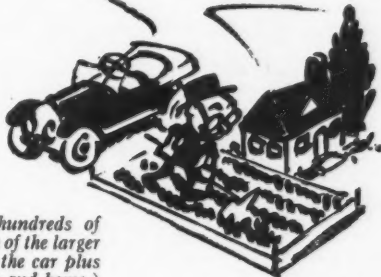
Sheep and poultry schools built on motor trucks and traveling through rural sections have been organized by the U. S. Department of Agriculture in co-operation with the State colleges of agriculture of North Carolina and Texas.

Officials of the Department of Agriculture say that more of this method of education is needed so that information on latest farming methods may be carried directly to farmers no matter how inaccessible the community may be.



135,000 Homes in 60 Cities Depend on Motor Transportation

(Figures given below are statements from the Real Estate Boards of the respective cities concerning the number of suburban homes which depend chiefly on motor vehicles for transportation. This does not include the hundreds of thousands of homes in the suburbs of some of the larger cities where the householder depends on the car plus the railroad to transport him between office and home.)



Community	Number Suburban Homes Depending Chiefly on Motor Transportation	Community	Number Suburban Homes Depending Chiefly on Motor Transportation
Baltimore, Md.	25,000	Tulare, Calif.	1,000
Detroit, Mich.	25,000	Jackson, Mich.	700
Louisville, Ky.	20,000	Royal Oak, Mich.	600
Oak Park, Ill.	5,000	Bakersfield, Calif.	500
Cleveland, Ohio.	5,000	Berkeley, Calif.	500
Toledo, Ohio.	3,500	Binghamton, N. Y.	500
Tampa, Florida.	3,000	Everett, Wash.	500
Dayton, Ohio.	3,000	Longmont, Colo.	500
Pasadena, Calif.	3,000	Lynchburg, Va.	500
Casper, Wyo.	3,000	Muncie, Ind.	500
Danville, Ill.	2,000	Charleston, W. Va.	500
Waterloo, Iowa.	2,000	Bremerton, Wash.	400
Nashville, Tenn.	2,000	Fort Wayne, Ind.	400
Winston-Salem, N. C.	2,000	Gary, Ind.	400
Tulsa, Okla.	2,000	West Palm Beach, Fla.	400
Houston, Texas.	2,000	Alliance, Ohio.	300
Richmond, Va.	2,000	Springfield, Mass.	300
Bellingham, Wash.	2,000	Syracuse, N. Y.	250
Santa Barbara, Calif.	1,500	Elkhart, Ind.	200
San Antonio, Tex.	1,200	Harvey, Ill.	200
Hamilton, Ohio.	1,200	Green Bay, Wis.	200
Hamilton, Texas.	1,200	Saginaw, Mich.	200
River ile, Calif.	1,000	Madison, Wis.	200
Battle Creek, Mich.	1,000	Canton, Ohio.	150
Kalamazoo, Mich.	1,000	Clinton, Iowa.	100
Phoenix, Ariz.	1,000	Pueblo, Colo.	100
Savannah, Ga.	1,000	Moline, Ill.	100
Sacramento, Calif.	1,000	Frankfort, Ind.	100
Seattle, Wash.	1,000	Cedar Rapids, Iowa.	100
Terre Haute, Ind.	1,000	Utica, N. Y.	100



SAFETY HONOR ROLL

28 Cities Reduce Motor Vehicle Accidents in 1921

Detroit Records 106 Fewer Fatalities—
St. Louis Lowers Total by 97

SAFETY HONOR ROLL

(Detroit and St. Louis figures, covering full calendar years, from National Safety Council. Other figures, for first ten months of 1920 and 1921 from Highway and Highway Transport Education Committee.)

City	Fatalities 1920	Fatalities 1921	City	Fatalities 1920	Fatalities 1921
Detroit, Mich.....	240	134	Newark, N. J.....	70	44
St. Louis, Mo.....	192	97	New Rochelle, N. Y.	6	3
Akron, Ohio.....	26	13	Norfolk, Va.....	12	9
Atlanta, Ga.....	21	11	Ogden, Utah.....	1	0
Bayonne, N. J.....	13	3	Paterson, N. J.....	10	7
Berkeley, Cal.....	14	4	Peoria, Ill.....	10	7
Bridgeport, Conn....	33	21	Pittsburgh, Pa.....	..	..
Buffalo, N. Y.....	77	27	Pittsfield, Mass.....	11	1
Cincinnati, Ohio.....	67	64	Providence, R. I....	23	21
Cleveland, Ohio.....	120	95	Richmond, Cal.....	2	1
Dayton, Ohio.....	15	12	Trenton, N. J.....	8	5
Grand Rapids, Mich.	12	11	Youngstown, Ohio...	19	11
Indianapolis, Ind....	98	56			
Lansing, Mich.....	3	2			
Milwaukee, Wis.....	79	53			
Minneapolis, Minn..	42	39			

*There is no question about the reduction of the number of accidents, but I am unable to give definite figures at this time. G. E. Clarkson, Executive Secretary, National Safety Council, Pittsburgh, Pa.

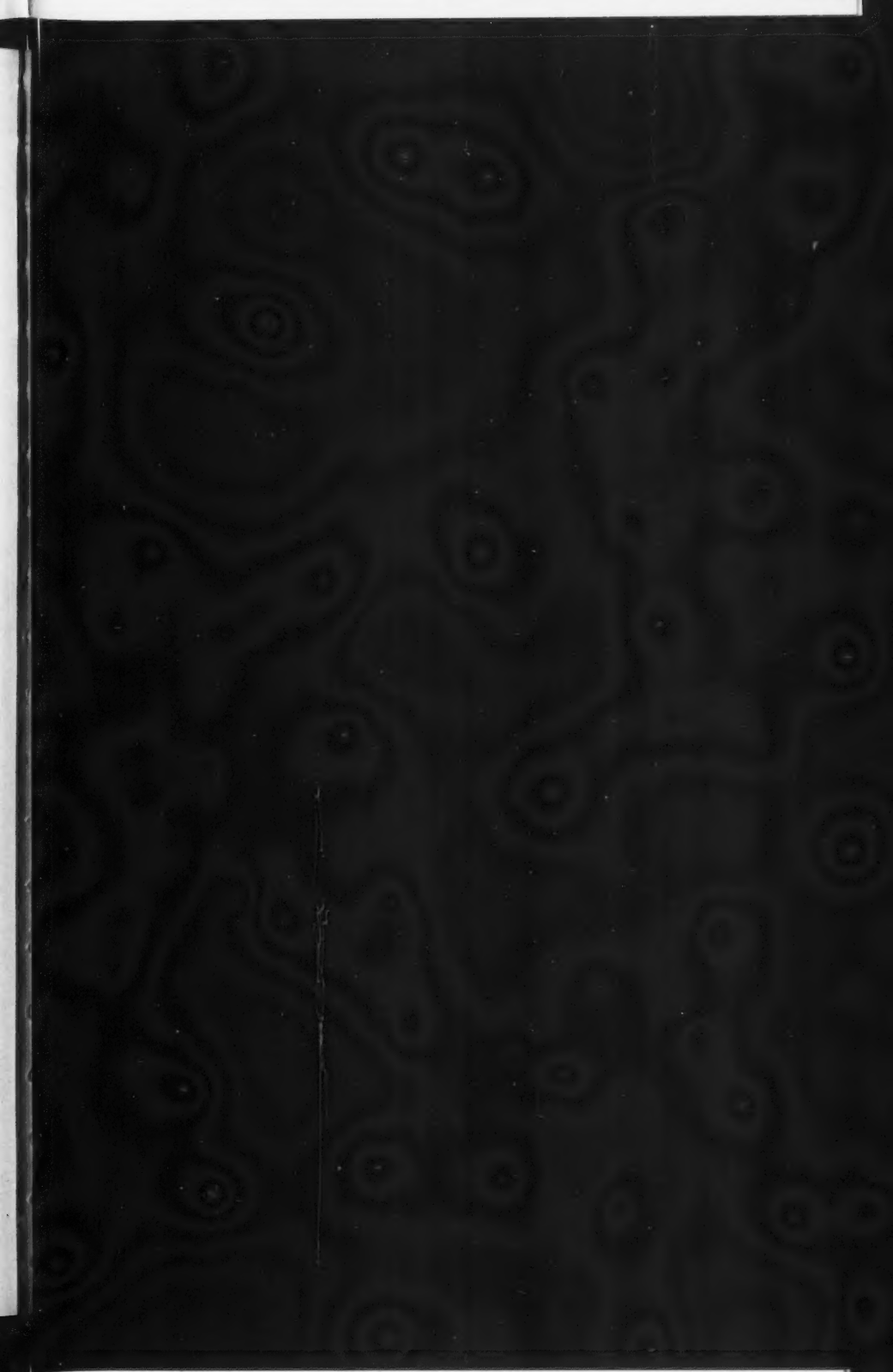
Ratio of Accidents to Traffic Declines

Safety on the highways is on the increase. Twenty-eight cities showed an actual decrease in motor traffic fatalities in 1921. For the nation as a whole there was an increase in fatal accidents, though the total was less than preceding years in proportion to the number of motor vehicles on the road.

Year	Number Auto Deaths per Car	Total Number Auto* Deaths	Registration of Cars	Number of Cars per 1000 Population	Auto Deaths per 1000 Population
1917.....	.0019	9184	4,983,340	48	.0887
1918.....	.0016	9672	6,146,617	59	.0919
1919.....	.0013	9827	7,558,848	71	.0936
1920.....	.00123	11,358	9,211,295	87	.1040
1921.....	.00119	12,500†	10,448,632	99	.1100

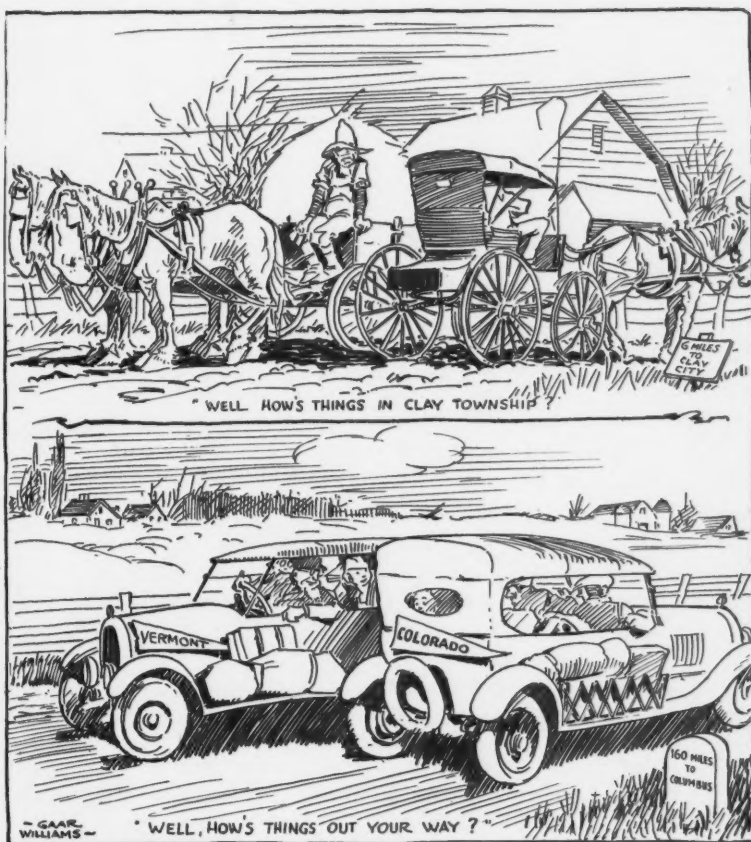
*Estimated of entire U. S. by National Workmen's Compensation Service Bureau applying Census Bureau figures for registration area to grand total.

†Estimated from incomplete figures.





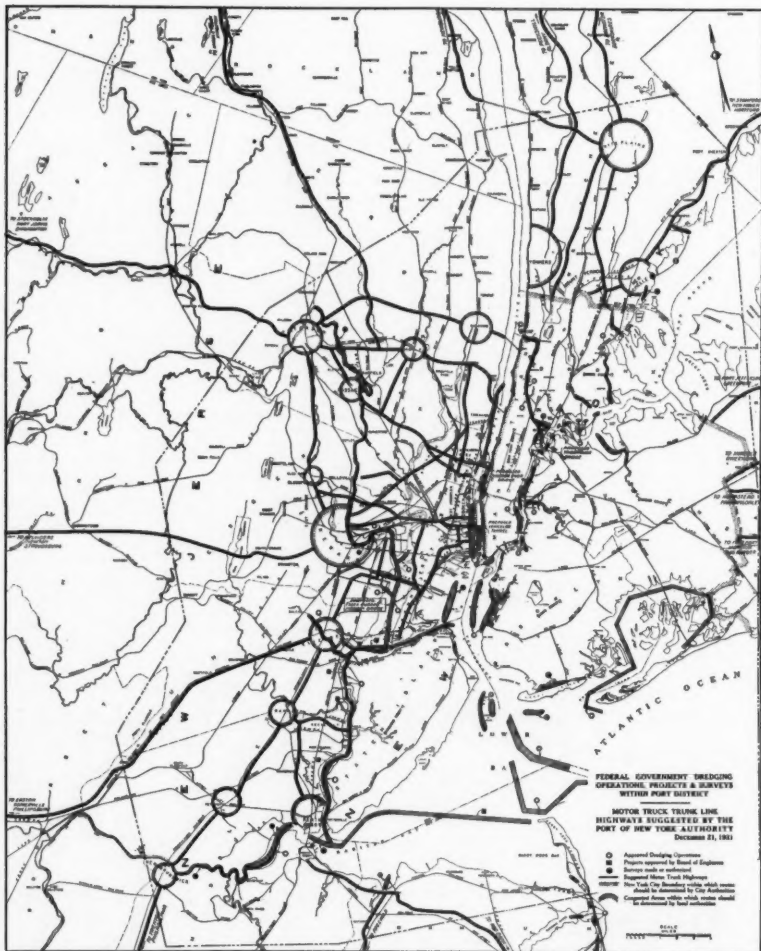
Motor Camping is Nation-wide



From Farm Life

Over a million motorists went camping last summer. About 800 cities now have municipal motor camp sites, and dozens more are planning to establish these accommodations in 1922. The National and State Forest Reserves, as well as privately owned grounds, furnish hundreds of additional camping areas. In 1922 there were 598,000 campers using the municipal sites, whereas hundreds of thousands more camped in the State and National Reservations. The Williams cartoon about indicates the wide development and breadth of opportunity that is coming to farm life as a result of inexpensive, efficient individual transportation by motor car.

Proposed N. Y. Port Development



Map shows proposed system of truck highways under Port of New York development plan. This system has been sponsored by the State authorities of New York and New Jersey, and is now being presented to the local communities for ratification. Under normal conditions 30,000 tons move into and 20,000 tons are transported from the Island of Manhattan (New York County) daily.

3,000,000 Motor Vehicles on Farms

2,850,000 Motor Cars—150,000 Motor Trucks

(NOTE—The following tabulations from the U. S. Department of Agriculture are as of January 1, 1920, and total 2,146,512 motor cars and 139,169 trucks. Registration of motor vehicles in the United States has increased 38% since January 1, 1920. This increase applied to the farm figures brings the farm total to 3,177,000, indicating that the 3,000,000 figure is today a conservative total for rural registration.)

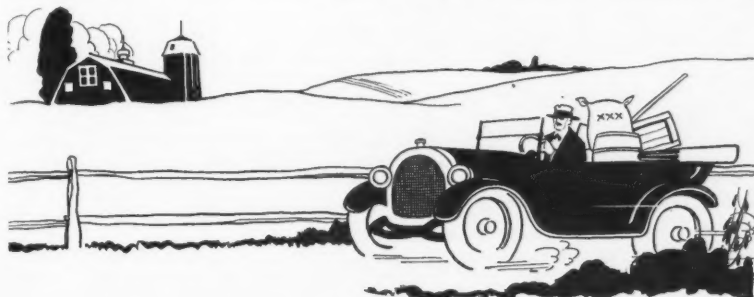
Division and State	Motor Cars	Motor Trucks	Division and State	Motor Cars	Motor Trucks
GEOGRAPHIC DIVISIONS:			SOUTH ATLANTIC:		
New England.....	44,754	8,119	Delaware.....	4,014	304
Middle Atlantic.....	164,939	22,011	Maryland.....	17,702	2,805
East North Central.....	550,858	26,074	Dist. of Columbia.....	58	29
West North Central.....	693,182	33,375	Virginia.....	30,959	2,544
South Atlantic.....	200,103	15,787	West Virginia.....	11,127	936
East South Central.....	86,141	5,153	North Carolina.....	44,207	2,671
West South Central.....	184,275	9,455	South Carolina.....	32,812	1,736
Mountain.....	98,727	7,589	Georgia.....	49,841	3,145
Pacific.....	123,533	11,606	Florida.....	9,383	1,617
NEW ENGLAND:			EAST SOUTH CENTRAL:		
Maine.....	12,569	1,120	Kentucky.....	30,146	1,538
New Hampshire.....	5,263	717	Tennessee.....	23,550	1,430
Vermont.....	8,172	616	Alabama.....	16,592	1,180
Massachusetts.....	9,309	3,535	Mississippi.....	15,853	1,005
Rhode Island.....	1,395	536	WEST SOUTH CENTRAL:		
Connecticut.....	8,046	1,595	Arkansas.....	16,408	1,027
MIDDLE ATLANTIC			Louisiana.....	10,512	874
New York.....	74,753	9,259	Oklahoma.....	52,063	2,155
New Jersey.....	13,695	3,380	Texas.....	105,292	5,399
Pennsylvania.....	76,491	9,372	MOUNTAIN:		
EAST NORTH CENTRAL:			Montana.....	22,072	1,225
Ohio.....	128,384	7,319	Idaho.....	17,646	837
Indiana.....	102,122	3,671	Wyoming.....	6,705	591
Illinois.....	139,090	6,154	Colorado.....	30,830	3,016
Michigan.....	82,437	4,886	New Mexico.....	6,018	583
Wisconsin.....	98,825	4,044	Arizona.....	5,082	581
WEST NORTH CENTRAL:			Utah.....	8,657	572
Minnesota.....	107,824	3,803	Nevada.....	1,717	174
Iowa.....	177,558	8,910	PACIFIC:		
Missouri.....	86,229	5,059	Washington.....	29,792	3,371
North Dakota.....	47,711	774	Oregon.....	22,223	1,819
South Dakota.....	58,352	4,353	California.....	71,518	6,416
Nebraska.....	104,453	6,548	Total United States.....		
Kansas.....	111,055	3,928	2,146,512 139,169		

States Having Most Cars on Farms

State	No. of Cars on Farms
1. Iowa.....	177,558
2. Illinois.....	139,090
3. Ohio.....	128,384
4. Kansas.....	111,055
5. Minnesota.....	107,824

States Having Most Trucks on Farms

State	No. Trucks on Farms
1. Pennsylvania.....	9,372
2. New York.....	9,259
3. Iowa.....	8,910
4. Ohio.....	7,319
5. Nebraska.....	6,548



ECONOMICS OF TRUCK USE

Motor Truck Use in Indianapolis

(Compiled by Indiana Transfer and Warehousemen's Association.)

Distribution of milk, groceries, laundries, merchandise, etc.....	500
Delivery of coal and ice.....	250
Freight transfer, baggage and express	550
Delivery of sand, gravel and building material.....	250
Manufacturing and building industry	175
Cartage delivery and distribution of vegetables and fruit products.....	85
Transfer of household goods.....	112
Inter-city and rural motor express...	160
Operating in and out of city in transporting livestock.....	250
Total	2282

Comparison of New England Rail and Motor Truck Rates

(Compiled by New England Traffic League, 1921, Published in Boston News Bureau)

	Railroad Rate per 100 lbs.	Motor Truck per 100 lbs.
Boston to Lynn (shoe findings)...	34½¢	22¢
North Dighton to Boston (textiles)	37¢	35¢
Boston to Fitchburg (confectionery)	46¢	40¢
Lowell to Boston (on multitude of articles)	31¢ to 46¢	30¢ to 40¢

Motor Truck Haulage in Stock Yards

On June 7, 1921, motor transport fleets delivered to the Kansas City stock-yards 1,000 head of sheep before 10:00 A.M. Total sheep receipts for the day were 9,000 head. The maximum radius was 45 miles. The running time for a 45 mile haul averaged 6 hours. In addition, 500 cattle and swine were delivered by truck on the same day. Rates charged by the motor truck operators were virtually the same as charged by the railroads for live stock hauls.

Erie General Manager Notes Truck Uses

"Some of the conditions under which motor truck operation can be substituted for present-day railroad operation are: short branch-line operation; trap car service; suburban distribution; utilization of outlying yards in lieu of yards in congested districts; and, terminal distribution."—R. S. Parsons, General Manager, Erie Railroad Company, New York City.

Hoover Says Truck Extends Food Supply Radius

The motor truck has given every town an extended radius of food supplies by some 50 miles and thereby protects such vital matters as milk and perishables. —Herbert Hoover, Secretary, Department of Commerce.

Motor Truck Efficiency in Express Business

A motor truck increases the area in which business can be done in about the ratio of its daily mileage. The maximum daily horse mileages in heavy and medium heavy haulage are 20 and 24 miles respectively. The average is not much more than half this, 12 and 14 miles. A motor truck can cover from 30 to 100 miles a day readily, although it is seldom as low as 30, and not often above 60; the average is below 40.—Statement of E. E. La Schum, General Superintendent, Motor Vehicle Equipment, American Railway Express.

650 RURAL COUNTIES WANT MORE TRUCKS

Estimates of County Agricultural Agents on Need for Further Utilization of Trucks on Farms

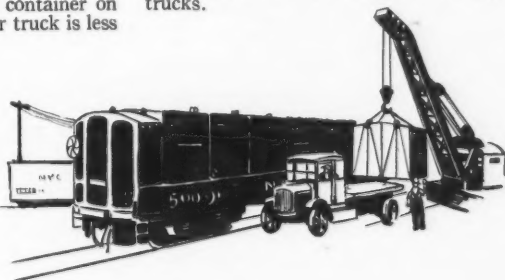
State	No. of Counties Expressing Need for More Trucks	Size Preferred	State	No. of Counties Expressing Need for More Trucks	Size Preferred
New Hampshire...	7	1 Ton	North Carolina....	30	1 Ton
Vermont.....	5	1 "	South Carolina....	11	1½ "
Massachusetts....	6	1 "	Georgia.....	59	1 "
Rhode Island.....	1	½ "	Kentucky.....	17	1 "
Connecticut.....	3	1½ "	Tennessee.....	11	1 "
New Jersey.....	11	1½ "	Mississippi.....	15	1 "
New York.....	31	1½ "	Louisiana.....	15	1-1½ "
Pennsylvania.....	43	1 "	Oklahoma.....	34	1 "
Ohio.....	27	1 "	Texas.....	32	1 "
Indiana.....	23	1½ "	Montana.....	15	1½ "
Illinois.....	18	1½ "	Idaho.....	14	1 "
Michigan.....	31	1 "	Wyoming.....	5	1 "
Wisconsin.....	18	1 "	Colorado.....	13	1 "
Minnesota.....	27	1 "	New Mexico.....	12	1½ "
North Dakota.....	6	1 "	Arizona.....	5	1 "
South Dakota.....	10	1 "	Utah.....	8	1 "
Nebraska.....	7	1 "	Nevada.....	2	1 "
Kansas.....	15	1 "	Washington.....	7	1 "
Delaware.....	2	1½ "	Oregon.....	6	1 "
Virginia.....	25	1 "	California.....	7	1 "
West Virginia.....	17	1 "			

Container Car Links Truck and Railroad

The New York Central Railroad has inaugurated the container car system of transporting less-than-carload freight, express matter and mail. This system makes it possible for portable steel-walled containers with a capacity of 7,000 pounds each to be loaded and locked on the shippers' premises and then conveyed by motor truck to freight cars. The time consumed in handling a single container on or off a car to or from motor truck is less

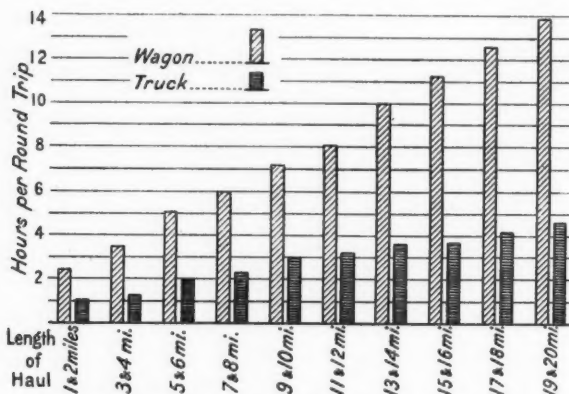
than two minutes; the average time wasted at freight stations under old system was 48 hours. Costly packing is eliminated; theft hazard is minimized; terminal congestion relieved. These factors lead railway officials to believe that the container system will ultimately prove the means of bringing about complete coordination of the railroads and motor trucks.

Drawn from photograph of N. Y. Central container car showing ease of transshipment.



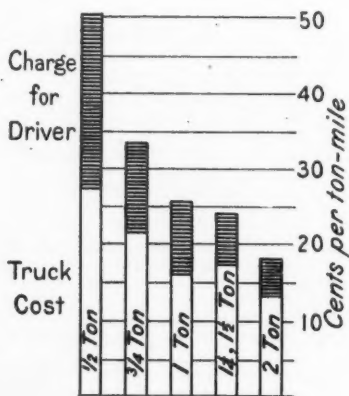
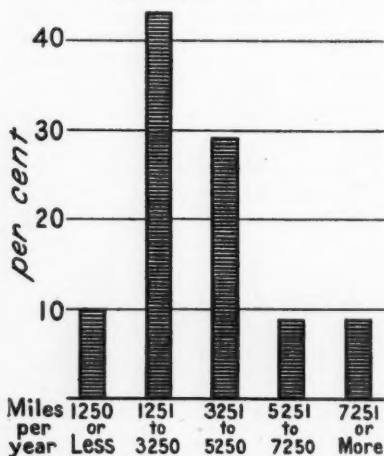
753 Farmers Tell How Trucks Serve

From a Survey, Bulletin 1201, by U. S. Dept. of Agriculture

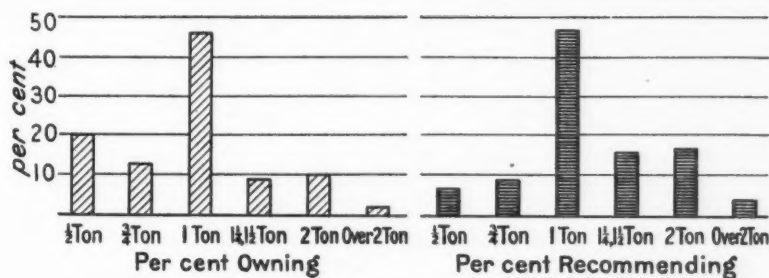


Ninety per cent of the 753 farmers reporting give time-saving as the greatest advantage of the motor truck. Note that even on the very short hauls the motor truck does the same haul in less than half the time by wagon.

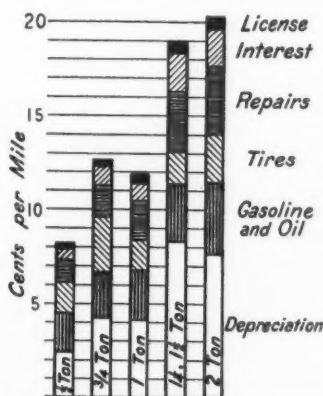
(Below)—3,820 is the average annual mileage of the farm truck. Dairy farmers average 244 days' use for the truck and crop farmers average the fewest number of days per year, viz. 127.



The figures above refer to cost per mile of hauling crops, and include loading and unloading time. The cost of 74 empty out of every 100 return trips is also included.

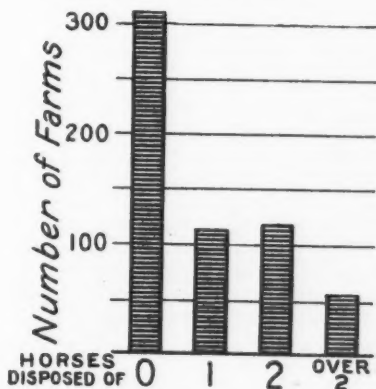


Testimony of this group of farmers shows a leaning toward the 1-ton truck. In the recommended sizes there will be noted a decrease in the 1/2- and 3/4-sizes with gains in the 1 1/4-, 1 1/2- and 2- groups. These figures are averages from the 753 cases which show considerable variation due to type of farming and local conditions.



These cost figures (above) are from 753 farms in the New England and North Atlantic States. They will vary according to road conditions and the skill of the operator. These trucks had return loads about 26% of the time. The driver's time was figured at 50 cents per hour.

(Below)—586 horses on 753 farms were displaced by motor trucks, but the tendency on the small farm is for the truck to supplement rather than supplant the horse. A man with only one or two horses, says the report, will usually need to keep them, but nearly two-thirds of the farmers who owned five or more horses disposed of at least one after purchasing the truck.



Motor Truck Standards of the N. A. C. C.

New Standards for Body Weight Allowances, Gross Weight, Chassis, Body and Freight Load, and the Standards Committee's Recommendations on Speeds.

(Adopted by motor truck members of the National Automobile Chamber of Commerce, in a general session held in the Chamber, at New York, on Thursday, Oct. 7, 1920.)

Under the new standards, Demonstration Charges for commercial vehicles embodied in Standards adopted in 1912. are eliminated.

The recommendations of the Standards Committee follows:

STANDARD SPEED RATING. We recommend that the present table (1912 Standards) be eliminated and that the following table be adopted:

Gross Weight, Chassis, Body and Freight Load	Speed Miles per Hour
Pneumatic tires up to 28,000 lbs.	25
Solid rubber tires, up to	
4,000 lbs.	25
8,000 "	20
12,000 "	18
16,000 "	16
20,000 "	15
24,000 "	15
26,000 "	15
28,000 "	15

NOTE—These speed ratings should be recognized by the manufacturer as the maximum and not exceeded under any conditions. The manufacturer should stamp on the truck caution plate the actual maximum speed with load for which the truck is built and beyond which the truck is not guaranteed.

STANDARD CAUTION PLATE FOR MOTOR TRUCKS. Committee recommends that the present form of plate should be retained and that the six foot-notes should be retained with the exception of the note headed, "Speed Rating" which should be revised to read as follows: "The figures given in the table headed Standard Speed Ratings for Motor Trucks' should be recognized by the

manufacturer as the maximum and not exceeded under any condition. Manufacturer should stamp on the truck caution plate the actual maximum speed with load for which the truck was built and beyond which the truck is not guaranteed."

As stated above truck manufacturers should be responsible for six of the weights which are called for on this plate, as follows:

Freight load capacity—Standard.

Body weight allowance—Standard.

Weight of chassis—Standard—Actual.

Total weight, chassis body and load—Standard—Actual.

The truck manufacturer, his distributor, dealer, or agent should be made responsible to see that the body is weighed and that the plate is stamped:

Freight load capacity—Actual.

Body weight allowance—Actual.

STANDARD BODY WEIGHT ALLOWANCES FOR MOTOR TRUCKS. We recommend that the present table (1912 Standards) be eliminated and that the following table be adopted:

Load Tons	Body Weight Allowance, Pounds
1	1200
1½	
2	1500
2½	
3	2000
3½	
4	
5 ton and over	2500

We recommend that no change be made in the note which now accompanies the table on standard body weight allowances.

Motor Bus Aids Rural Education

Oklahoma Transports 19,000, and North Carolina Carries 14,000 Pupils To School in Motor Vehicles

179 New Consolidated Schools in Georgia in 1921



Right—Wood County, Ohio. Consolidated School. Sketch in upper right hand corner shows one-room school of type being abandoned in favor of modern union schools.



CONSOLIDATION of the old-fashioned one-room rural schools into modern union schools with up-to-date buildings and higher-paid teachers is going forward steadily according to the U. S. Bureau of Education. The total number of consolidated schools in the United States is over 12,000. Statistics for 1921 are available only for a few states, as follows:

Rural Consolidated School Progress 1921

State	No. Consolidated Schools	No. Consolidated Schools Established 1921	Total Pupils Transported At Public Expense	Total Pupils Transported by Motor Bus
Connecticut.....	127*	...	6,030†	**
Delaware.....	6	...	850	...
Georgia.....	315	179	9,497	...
Florida.....	120	...	8,000	...
Iowa.....	439	...	34,743	\$
Kansas.....	80	...	...	4,400
Kentucky.....	115	19	5,000	3,500
Minnesota.....	290	35	20,000	2,800
Nevada.....	6	...	500	500
North Carolina.....	...	...	15,000	14,000
Oklahoma.....	330	104	31,650	19,480
Texas.....	630	...	2,685	...
Vermont.....	50	...	3,600	180

*Number of Connecticut towns having complete or partially consolidated schools. Complete consolidation in six towns.

†Figure for 1920, latest available record.

**Automobile buses are used in many districts and their use is increasing—*Connecticut Schools*, Vol. 3, No. 5.

§Number of motor vehicles for school use in Iowa is 579 as compared with 1802 horse-drawn vehicles.

Typical Motor Truck Express Rates

(These are the rates of the Tidewater Lines, Inc., Maryland, as approved by the Public Service Commission of that State. Though higher than rates charged by some haulage lines, they are typical of the charges of a successful experienced company.)

COMMODITIES	Unit Basis	1 Mile	16 Miles	36 Miles	61 Miles	81 Miles
		to 15 Miles	to 35 Miles	to 60 Miles	to 80 Miles	and Over
Agricultural Implements, hand (crated).....	Per 100 lbs.	\$0.50	\$0.70	\$0.75	\$0.85	\$0.90
Cider.....	Per 100 lbs.	.40	.45	.50	.60	.65
Eggs, securely packed in crates.....	Per 100 lbs.	.50	.70	.75	.80	.85
Eggs, crates, returned empty.....	Each	.15	.15	.15	.15	.15
Fertilizer, packed.....	Per 100 lbs.	.40	.45	.50	.60	.65
Flour, in barrels.....	Per 100 lbs.	.40	.45	.50	.60	.65
Flour, in sacks.....	Per 100 lbs.	.50	.55	.60	.70	.75
Apples and Pears in barrels.....	Per 100 lbs.	.50	.55	.60	.70	.75
Oranges in boxes.....	Per 100 lbs.	.50	.70	.75	.85	.90
Other Kinds of Fruit (packed).....	Per 100 lbs.	.50	.75	.80	.90	.95
Grain.....	Per 100 lbs.	.40	.45	.50	.60	.65
Hay.....	Per 100 lbs.	.50	.55	.60	.70	.75
Livestock (on hoof).....	Per 100 lbs.	.50	.70	.75	.85	.90
Meat.....	Per 100 lbs.	.50	.70	.75	.85	.90
Poultry, live.....	Per 100 lbs.	.50	.75	1.00	1.25	1.50
Poultry, dressed.....	Per 100 lbs.	.50	.75	1.00	1.25	1.50
Straw.....	Per 100 lbs.	.50	.55	.60	.70	.75
Sugar, in barrels.....	Per 100 lbs.	.40	.45	.50	.60	.65
Sugar, in sacks.....	Per 100 lbs.	.50	.55	.60	.70	.75
Vegetables, fresh (packed).....	Per 100 lbs.	.45	.55	.60	.70	.75
Vinegar.....	Per 100 lbs.	.40	.45	.50	.60	.65

INDUSTRIAL AND OTHER PRODUCTS

Barrels (oyster empties returned including cans).....	Each	.25	.25	.25	.25	...
Barrels, Oil (returned).....	Per 100 lbs.	.25	.25	.25	.25	.30
Bottled goods.....	Per 100 lbs.	.50	.65	.60	.70	.75
Brick, packed in barrels, boxes.....	Per 100 lbs.	.25	.30	.35	.40	.45
Building Material (wooden).....	Per 100 lbs.	.60	.65	.70	.80	.85
Canned Goods (in cans).....	Per 100 lbs.	.50	.55	.60	.70	.75
Carbide of Calcium.....	Per 100 lbs.	.50	.55	.60	.70	.75
Cement.....	Per 100 lbs.	.30	.35	.40	.50	.55
Coal (in sacks).....	Per 100 lbs.	.35	.40	.45	.60	.65
Coca-Cola.....	Per 100 lbs.	.50	.55	.60	.70	.75
Coca-Cola (in bbl.).....	Per 100 lbs.	.50	.55	.60	.70	.70
Coops, patented.....	Each	.25	.25	.25	.25	.25
Coops, homemade.....	Per 100 lbs.	.30	.35	.40	.40	.40
Crates, Bottled Goods (empties).....	Per 100 lbs.	.35	.40	.45	.50	.55
Drain Tile & Clay Pipe, packed.....	Per 100 lbs.	.40	.45	.50	.60	.65
Fish, salt, in barrels or kegs.....	Per 100 lbs.	.40	.45	.50	.50	.55
Fish, fresh (packed).....	Per 100 lbs.	.50	.55	.60	.60	.65
Gasoline.....	Per 100 lbs.	.50	.55	.60	.70	.75
Hardware and Automobile Parts (boxed).....	Per 100 lbs.	.50	.55	.60	.70	.75
Horse Shoes and Nails.....	Per 100 lbs.	.30	.35	.40	.50	.55

	Unit Basis	1 Mile to 15 Miles	16 Miles to 35 Miles	36 Miles to 60 Miles	61 Miles to 80 Miles	81 Miles and Over
Ice.....	Per 100 lbs.	\$0.50	\$0.55	\$0.60	\$0.70	\$0.75
Ice Cream.....	Per 100 lbs.	.50	.70	.75	.85	.90
Ice Cream Tubs (returned).....	Per Tub	.25	.30	.35	.50	.55
Iron Articles, weighing 100 lbs. or more.....	Per 100 lbs.	.40	.45	.50	.60	.65
Iron Galvanized, boxed or crated.....	Per 100 lbs.	.50	.55	.60	.70	.75
Laundry, in bags, boxes or crates.....	Per 100 lbs.	.40	.45	.50	.60	.65
Lime (packed).....	Per 100 lbs.	.40	.45	.50	.60	.65
Lumber (not over 14 feet long).....	Per 100 lbs.	.30	.35	.40	.50	.55
Machinery (packed).....	Per 100 lbs.	.50	.70	.75	.85	.90
Molasses (in bbls.).....	Per 100 lbs.	.40	.45	.50	.60	.65
Nails and Spikes (in kegs).....	Per 100 lbs.	.30	.35	.40	.50	.55
Oil, Coal (in bbls.).....	Per 100 lbs.	.30	.35	.40	.50	.55
Oil, Lubricating (in barrels).....	Per 100 lbs.	.40	.45	.50	.60	.65
Oil Barrels (returned).....	Per 100 lbs.	.25	.25	.25	.25	.25
Oysters, shucked in cans (in barrels).....	Per gallon	.08	.08	.08	.10	.10
Oysters in Shell (in barrels).....	Per 100 lbs.	.40	.45	.50	.60	.65
Paint.....	Per 100 lbs.	.50	.55	.60	.70	.75
Paper, wrapping.....	Per 100 lbs.	.50	.50	.55	.65	.70
Paper, bags.....	Per 100 lbs.	.50	.50	.55	.65	.70
Pickles (in barrels or kegs).....	Per 100 lbs.	.50	.55	.60	.70	.75
Roofing Material (prepared).....	Per 100 lbs.	.50	.55	.60	.70	.75
Salt.....	Per 100 lbs.	.25	.30	.35	.40	.45
Shingles.....	Per 100 lbs.	.50	.55	.60	.70	.75
Soda Water (in tanks).....	Per 100 lbs.	.50	.85	.90	1.00	1.25
Soda Water (in crates).....	Per 100 lbs.	.50	.55	.60	.70	.75
Tar (in barrels).....	Per 100 lbs.	.35	.40	.45	.55	.60
Tobacco, unmanufactured.....	Per 100 lbs.	.50	.55	.60	.70	.75
Tobacco, Cigars and Cigarettes.....	Per 100 lbs.	.50	.75	.80	.90	.95
Wire Fencing (in rolls).....	Per 100 lbs.	.50	.55	.60	.70	.75

STANDARD TRUCK COST SYSTEM

Truck costs fall into two classes, fixed and variable. The first classification includes the charges for retiring the investment, for interest on the investment, insurance, garage, licenses, drivers, and similar items. In the second category of charges are found such items as oil, gasoline and tires, which are dependent on mileage. Items of repairs, parts and lost time are perhaps the most variable. The greatest value of keeping accurate costs comes through a careful analysis of these items. A truck is not operating at a profit unless its earnings exceed all these items chargeable to its operation, including the cost of keeping an account of these expenses. Proper truck cost records, such as are made by the National Standard Truck Cost System, indicate at all times what income is necessary to show a profit and are a perpetual inventory upon which to base sound resale values. The purpose of this system is to gather within a single cover the complete costs and operation data of one truck for one year; to arrange it in accessible form; and, to make it as simple as possible to operate. Full information on truck cost matters can be secured by corresponding with the National Motor Truck Committee, National Automobile Chamber of Commerce.

Motor Truck Lowers Flour Shipment Costs

(A comparative study of interurban shipments by motor truck and railroad, compiled by the Cleveland Milling Company.)

Cleveland to Akron, Ohio, 38 Miles

Cost by freight

Cartage to depot, 10,000 lbs. @ 10¢ per 100 lbs.....	\$10.00
Freight & tax, 10,000 lbs. @ 11½¢ per 100 lbs.....	11.85
Cartage at destination, 10,000 lbs. @ 7½¢ per 100 lbs.....	7.50
Total Cost.....	<u>\$29.35</u>

Cost by truck

Fixed charges, 8 hours @ \$7.356 per 10-hour day....	\$ 5.884
Variable charges, 80 miles @ \$.1659 per mile.....	13.272
Total Cost.....	<u>\$19.156</u>
Net saving per trip by truck.....	\$10.19

Cleveland to Ashtabula, Ohio, 58 Miles

Cost by freight

Cartage to depot, 10,000 lbs. @ 10¢ per 100 lbs.....	\$10.00
Freight & tax 10,000 lbs. @ 13¢ per 100 lbs.....	13.39
Cartage at destination 10,000 lbs. @ 7½¢ per 100 lbs.....	7.50
Total Cost.....	<u>\$30.89</u>

Cost by truck

Fixed charges, 10 hours @ \$7.356 per 10-hour day..	\$ 7.356
Variable charges, 116 miles @ \$.1659 per mile.....	19.244
Total Cost.....	<u>\$26.600</u>
Net saving per trip by truck.....	\$4.29

Cleveland to Canton, Ohio, 59½ Miles

Cost by freight

Cartage to depot, 10,000 lbs. @ 10¢ per 100 lbs.....	\$10.00
Freight & tax 10,000 lbs. @ 13¢ per 100 lbs.....	13.39
Cartage at destination, 10,000 lbs. @ 7½¢ per 100 lbs.....	7.50
Total Cost.....	<u>\$30.89</u>

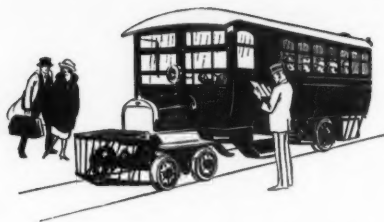
Cost by truck

Fixed charges, 11 hours @ \$7.356 per 10 hour day..	\$ 8.092
Variable charges, 119 miles @ \$.1659 per mile.....	19.742
Total Cost.....	<u>\$27.834</u>
Net saving per trip by truck.....	\$3.06

Motor Truck Haulage in New England

(The following figures represent the total of East bound traffic on the Boston Post Road at Greenwich, Conn., on the New York-Connecticut border, Oct. 3-16, 1921. Census by U. S. Bureau of Public Roads.)

	Average Haul Miles	Total Net Wgt. in Lbs. of Goods Checked by Census	Av. Net Wgt. per Vehicle		Average Haul Miles	Total Net Wgt. in Lbs. of Goods Checked by Census	Av. Net Wgt. per Vehicle
Apples.....	26.83	94,050	5,225	Litharge.....	106.25	114,370	12,708
Awning Goods.....	43.75	18,330	6,110	Machinery.....	89.10	115,875	7,725
Bananas.....	47.13	133,627	9,545	Marble.....	27.26	14,865	4,955
Barrels.....	37.29	54,840	2,742	Merchandise.....	42.88	153,831	4,801
Bedding.....	6.75	8,720	1,353	Meat Products.....	42.75	334,410	4,100
Beer.....	72.92	421,665	10,812	Milk.....	5.80	4,725	2,362
Biscuits.....	33.88	68,856	5,738	Soda and Min. Water.....	8.00	7,785	1,297
Boats.....	150.00	840	840	Miscellaneous.....	42.64	198,995	4,628
Boxes.....	50.65	36,580	3,658	Metal.....	47.50	89,585	9,954
Butter.....	68.21	83,032	5,535	Nursery Supplies.....	39.61	16,150	2,307
Bowling Goods.....	96.25	16,580	4,145	Novelties.....	75.00	1,485	1,485
Bread.....	23.66	51,565	2,465	Oil.....	38.63	75,250	5,357
Brick Plaster.....	27.26	113,445	6,673	Oxygen Tank.....	50.00	1,150	1,150
Cake.....	35.83	1,100	275	Paints.....	41.43	55,820	5,074
Candy.....	54.10	20,500	41,000	Paper.....	51.79	111,880	3,857
Cans.....	45.50	13,540	4,513	Perishable Goods.....	17.00	3,020	1,510
Caskets.....	75.00	3,340	3,340	Pianos & Mus. Inst.....	46.71	51,435	2,707
Castings.....	25.44	15,200	3,040	Plaster Casts.....	35.00	100	100
Charcoal.....	3.50	2,150	717	Plumbing Supplies.....	42.26	67,825	4,239
Cheese.....	60.00	21,910	3,652	Potatoes.....	36.45	35,425	3,220
Chemicals.....	35.21	94,750	8,614	Poultry.....	32.67	159,760	5,325
Cider Barrels.....	22.50	925	925	Presto Tank.....	52.67	2,785	1,392
Cider.....	11.75	1,535	512	Produce.....	40.12	32,125	3,569
Corsets.....	60.41	26,460	6,615	Rags.....	35.00	3,010	3,010
Cream.....	12.12	14,250	3,563	Repair Work.....	30.00	14,025	3,506
Crude Oil.....	43.75	.....	.....	Rubber Goods.....	82.96	279,020	10,731
Cut Glass.....	141.66	3,505	1,653	Rugs.....	26.67	4,910	1,637
Cocoa Beans.....	33.12	158,518	13,210	Satins.....	133.00	28,480	4,747
Delicatessen.....	35.5	14,585	2,413	Show Goods.....	58.25	26,320	6,580
Drugs.....	69.11	62,195	5,654	Silks.....	110.22	125,305	6,961
Dry Goods.....	43.79	133,360	2,021	Soap.....	64.67	100	100
Dyed Goods.....	43.79	100	100	Sugar.....	47.26	404,640	10,936
Eggs.....	68.21	89,962	6,920	Shoes.....	55.37	22,850	5,713
Electric Cable.....	52.50	89,490	11,186	Stone.....	27.26	7,410	7,410
Empty.....	38.79	.....	.....	Tallow.....	42.75	6,160	6,160
Electrical Supplies.....	52.5	2,590	1,295	Tarvia.....	41.5	57,710	14,428
Flour.....	53.61	8,515	4,258	Telephone Supplies.....	100.00	550	550
Feed.....	27.10	131,140	3,747	Textile Goods.....	69.45	47,849	4,350
Fish.....	55.44	107,745	3,747	Tires.....	60.44	11,025	1,838
Fixtures.....	63.75	21,400	5,350	Tobacco.....	73.50	39,050	4,339
Flowers.....	19.25	1,650	825	Tools.....	101.66	8,705	2,902
Fruit.....	48.06	258,214	6,978	Towels.....	52.50	100	100
Fur.....	55.50	80,495	4,735	Trunks.....	48.12	1,005	503
Furniture.....	71.47	553,545	4,194	Typewriters & Sup.....	106.25	48,720	6,960
Garments.....	45.31	14,915	2,466	Vegetables.....	37.68	176,893	4,020
Gas and Oil.....	30.54	16,890	2,815	Velvet.....	75.00	14,020	4,673
General Trucking.....	59.93	116,555	5,828	Vinegar.....	63.57	75,125	10,732
Glass.....	41.00	65,715	5,476	Wheat.....	71.40	630	530
Grapes.....	48.56	141,220	6,725	Wire.....	66.50	145,550	8,561
Groceries.....	44.15	1,039,469	8,058	Wood.....	19.00	10,050	5,025
Granite.....	27.26	17,060	8,530	Workman.....	48.38	8,930	2,976
Horses.....	58.00	14,610	4,870	Not Given.....	48.38	182,165	4,794
Household Goods.....	99.81	375,495	4,037	Yeast.....	150.00	10,445	10,445
Hardware Supplies.....	43.32	68,425	4,887				
Ice Cream.....	19.88	44,150	5,519				
Iron and Steel.....	44.12	76,820	6,984				
Iron Wire.....	75.00	2,430	2,430				
Leather.....	104.75	24,990	6,247				
Laundry.....	14.93	4,220	352				
Lumber.....	35.51	119,805	4,437				
						8,586,471	
				Total lb. miles		479,164,948	
				Total ton miles		239,562,048	



Short Line Railroads Using Motor Buses With Flanged Wheel Equipment

Name of Railroad	State	Distance
New York, New Haven & Hartford.....	Connecticut.....	104 Miles
Great Northern }	Oregon.....	35 "
Northern Pacific }		
Cleveland, Cincinnati, Chicago & St. Louis.....	Indiana.....	84 "
Baltimore & Ohio.....	Maryland.....	"
Narragansett Pier.....	Rhode Island.....	8 "
Aberdeen & Rockfish.....	North Carolina.....	60 "
Central West Virginia & Southern.....	West Virginia.....	32 "
Sewell Valley.....	West Virginia.....	40 "
Mt. Hood.....	Oregon.....	22 "
Virginia & Truckee.....	Nevada.....	31 "
Nehalem River.....	Oregon.....	35 "
Tonopah & Gold Field.....	Nevada.....	31 "
Hetch Hetchy.....	California.....	69 "
Atlantic & Western.....	North Carolina.....	25 "
Carrollton & Worthville.....	Kentucky.....	10 "
Stone Harbor.....	Virginia.....	4 "
Greenbriar & Eastern.....	West Virginia.....	10 "
New Mexico Central.....	New Mexico.....	116 "
Gilmore & Pittsburgh.....	Montana.....	100 "
Winchester & Western.....	West Virginia.....	40 "
New Orleans & Lower Coast.....	Louisiana.....	60 "
Palatina, Lake Zurich & Wauconda.....	Illinois.....	16 "
Chesapeake Western.....	Virginia.....	41 "
Pittsburg & Shawmut.....	Pennsylvania.....	103 "
Kanawha Glen Jean & Eastern.....	West Virginia.....	14 "
Pittsburgh & Susquehanna.....	Pennsylvania.....	13 "
Morristown & Erie.....	New Jersey.....	10 "

Effect of Motor Transport on R. R. Securities

To the extent to which the motor cars are likely to take over the short-haul freight traffic, the railroads will probably be immediately benefited financially, because short-haul business is becoming increasingly unremunerative on account of the high proportion of terminal costs which it must sustain. Altogether, I am not afraid of motor cars and aeroplanes making railroads obsolete.

—Elisha Lee, Vice-President, Pennsylvania System.

Motor Express Lines Listed by States

(NOTE: These are lines recorded at the offices of the National Automobile Chamber of Commerce. The grand total of all public motor express lines is probably about 1,500. The tendency each year, however, is toward consolidation, with fewer lines doing larger business.)

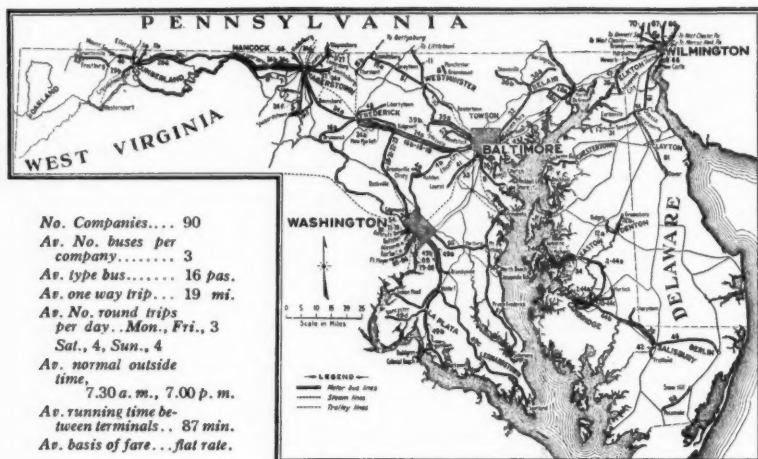
STATE	No.	STATE	No.	STATE	No.
CALIFORNIA.....	212	MICHIGAN.....	46	OKLAHOMA.....	43
Los Angeles.....	124	Detroit.....	27	Oklahoma City..	14
Oakland.....	31	MISSOURI.....	16	PENNSYLVANIA.....	74
COLORADO.....	9	St. Louis.....	15	Philadelphia.....	27
CONNECTICUT.....	6	MONTANA.....	9	Pittsburg.....	27
DELAWARE.....	5	NEBRASKA.....	12	RHODE ISLAND.....	104
FLORIDA.....	3	NEVADA.....	6	Providence.....	67
IDAHO.....	5	NEW HAMPSHIRE.....	5	SOUTH CAROLINA....	1
ILLINOIS.....	9	NEW JERSEY.....	13	SOUTH DAKOTA.....	2
INDIANA.....	2	NEW YORK.....	106	TEXAS.....	11
IOWA.....	11	Rochester.....	32	VIRGINIA.....	2
KANSAS.....	32	Syracuse.....	27	WASHINGTON.....	3
KENTUCKY.....	3	NORTH CAROLINA... 1		WISCONSIN.....	9
LOUISIANA.....	9	NORTH DAKOTA..... 4			
MAINE.....	33	OHIO.....	57		
Bangor.....	32	Toledo.....	18	Total Public Motor Ex-	
MARYLAND.....	1	Youngtown.....	16	press Lines listed at	
MASSACHUSETTS....	140			N. A. C. C. Offices....	984
Boston.....	86			Estimated Grand Total.	1500



The principal motor transport lines radiating out from the various shipping centers are shown on the above map. The United States Senate Committee on Reconstruction and Production has estimated the annual motor truck mileage of the U. S. at 7,150,000,000 and 1,430,000,000 the number of tons of freight transported over the highways.

90 Motor Bus Lines in Maryland

(Chart and Figures from Bus Transportation)



Electric Railways Operating Motor Buses

Name of Railway	Location
Inter City Term. Ry.	Argenta, Ark.
Bakersfield & Kern	
Elec. R.R.	Bakersfield, Cal.
Pacific Electric Ry. . .	Los Angeles, Cal.
San Francisco—Oakland Ter. Rys.	San Francisco, Cal.
Pacific Gas & Electric Co.	Sacramento, Cal.
San Francisco Municipal Rys.	San Francisco, Cal.
San Jose Railroads... ..	San Jose, Cal.
Santa Barbara & Suburban Ry.	Santa Barbara, Cal.
Stockton Electric Ry. Co.	Stockton, Cal.
The Connecticut Co..	New Haven, Conn.
Danbury & Bethel St. Ry. Co.	Danbury, Conn.

Name of Railway	Location
Rockford City Trac-tion Co.	Rockford, Ill.
Southern Ill. Inter'n	Springfield, Ill.
Ft. Wayne & North'n Indiana Trac'n Co.	Ft. Wayne, Ind.
Dubuque Electric Co.	Dubuque, Iowa
Baltimore Transit Co. controlled by United Rys. & Elec. Co.	Baltimore, Md.
Bay State System... ..	Boston, Mass.
Conn. Vy. St. Ry. . .	Greenfield, Mass.
Holyoke Street Ry... ..	Holyoke, Mass.
Escanaba Pwr. & Trac. Co.	Escanaba, Mich.
United Railways Co..	Detroit, Mich.
Minn. St. Ry. Co... ..	Minneapolis, Minn.
St. Joseph Ry., Lt., Ht. & Pwr. Co..	St. Joseph, Mo.

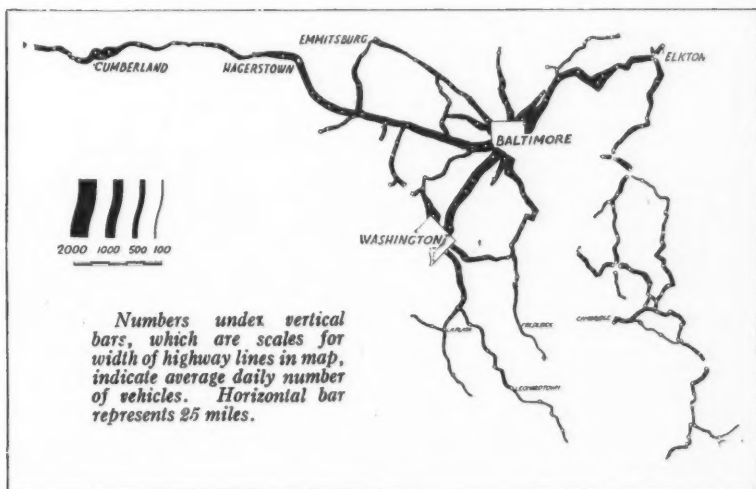
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Electric Railways Operating Motor Buses

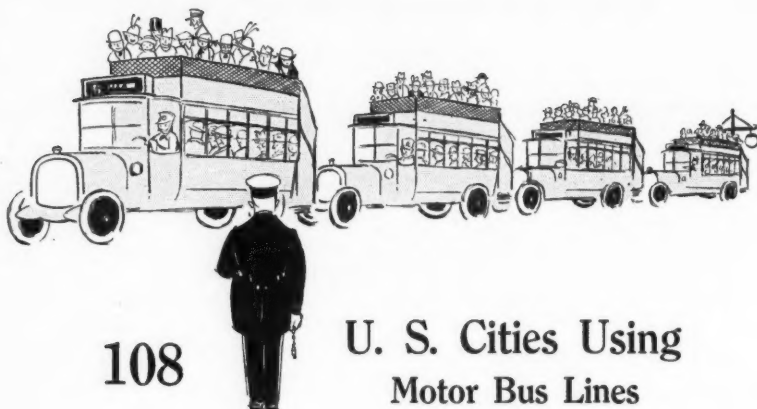
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Name of Railway	Location	Name of Railway	Location
Citizens' Transit Co. (Controlled by Citizens' Traction Co.)	Oil City, Pa.	Ft. Worth Auto Bus Co. (Controlled by Northern Texas Traction Co.)	Ft. Worth, Texas
Johnstown & Somerset Ry.....	Johnstown, Pa.	Seattle Municipal Ry. Co.....	Seattle, Wash.
Nashville Inter. Ry.	Nashville, Tenn.	Milwaukee Elec. Ry. & Lt. Co.....	Milwaukee, Wis.

TRAFFIC MAP OF MARYLAND



Above map shows main highways of Maryland. The widths of the lines indicate volume of daily average traffic (see scale). It will be noted that on an improved road the traffic tends to become fairly stable throughout its length. For instance, the traffic between Hagerstown and Baltimore is virtually uniform. This map was compiled by the Engineering Experiment Station of the University of Maryland, A. N. Johnson, director, in cooperation with State Road Commission, J. N. Mackall, chairman, and the U. S. Bureau of Public Roads, T. H. MacDonald, chief.



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U. S. Cities Using Motor Bus Lines

Birmingham, Ala.
Chitina, Alaska
Phoenix, Ariz.
Miami, Ariz.
Little Rock, Ark.
Wilmot, Ark.
Los Angeles, Calif.
Oakland, Calif.
Fresno, Calif.
Long Beach, Calif.
San Francisco, Calif.
Denver, Colo.
Bridgeport, Conn.
Hartford, Conn.
New Haven, Conn.
Waterbury, Conn.
Danbury, Conn.
Wilmington, Del.
Dover, Del.
Washington, D. C.
Miami, Fla.
Tampa, Fla.
Atlanta, Ga.
Pocatello, Ida.
Coeur d'Alene, Ida.
Chicago, Ill.
Rockford, Ill.
Decatur, Ill.
Elkhart, Ind.
Indianapolis, Ind.
South Bend, Ind.
Des Moines, Iowa
Waterloo, Iowa
Topeka, Kans.
Wichita, Kans.

Lexington, Ky.
Frankfort, Ky.
New Orleans, La.
Bangor, Me.
Baltimore, Md.
Salisbury, Md.
Boston, Mass.
Gloucester, Mass.
Holyoke, Mass.
Bay City, Mich.
Detroit, Mich.
Grand Rapids, Mich.
Lansing, Mich.
Battle Creek, Mich.
Duluth, Minn.
Minneapolis, Minn.
Buhl, Minn.
Fergus Falls, Minn.
Springfield, Miss.
Lincoln, Neb.
Omaha, Neb.
Reno, Nev.
Camden, N. J.
Jersey City, N. J.
Newark, N. J.
Paterson, N. J.
Perth Amboy, N. J.
Raton, N. M.
Albany, N. Y.
Buffalo, N. Y.
Brooklyn, N. Y.
Kingston, N. Y.
Niagara Falls, N. Y.
Newburgh, N. Y.
New York City, N. Y.
Poughkeepsie, N. Y.

Rochester, N. Y.
Troy, N. Y.
Asheville, N. C.
Chapel Hill, N. C.
Grand Forks, N. D.
Akron, Ohio
Cincinnati, Ohio
Cleveland, Ohio
Youngstown, Ohio
Toledo, Ohio
Oklmulgee, Okla.
Portland, Ore.
Salem, Ore.
Harrisburg, Pa.
West Chester, Pa.
Philadelphia, Pa.
Reading, Pa.
Providence, R. I.
Ashville, S. C.
Charleston, S. C.
Greenville, S. C.
Nashville, Tenn.
Knoxville, Tenn.
Columbia, Tenn.
Fort Worth, Tex.
Galveston, Tex.
Alexandria, Va.
Petersburg, Va.
Seattle, Wash.
Spokane, Wash.
Tacoma, Wash.
Aberdeen, Wash.
Wheeling, W. Va.
Milwaukee, Wis.
Superior, Wis.
Kenosha, Wis.

Statistics of the Road Building Industry

(Figures from American Road Builders Association)

Persons identified with road building:

Highway officials, federal, state, town, county.....	80,000
Road Contractors.....	7,000
Bridge Contractors.....	2,000
Civil and highway engineers.....	15,000
Automotive and chemical engineers.....	10,000
Geologists.....	325

Equipment Manufacturers and Dealers:

Road machinery and equipment manufacturers.....	11,096
Highway Transportation equipment manufacturers.....	7,338
Dealers in second-hand equipment.....	52

Road Materials Manufacturers:	Combined Capital	Value of Annual Output
206 Cement manufacturers.....	\$3,066,000,000	\$375,000,000
127 Paving brick manufacturers.....	17,620,000	7,145,000
46 Wood paving block manufacturers.....	4,500,000	4,800,000
23 Granite block manufacturers.....	5,996,000	1,547,000
380 Crushed stone manufacturers.....	27,900,000	9,500,000
342 Sand and gravel producers.....	9,130,000	13,000,000
42 Asphalt producers.....	126,000,000	44,610,000

Miscellaneous Facts:

National and local engineering and highway organizations.....	842
Roads committees of Chambers of Commerce and other commercial bodies.....	832

Motor Trucks Reduce Farm Costs

Nothing since the advent of the railroads has had so marked an economic and sociological effect upon the production life of the country as the motor vehicle. The Commission will recommend that Congress continue to promote an adequate program of highway construction and maintenance, directed to the more effective correlation of highway transportation with rail and water transportation.

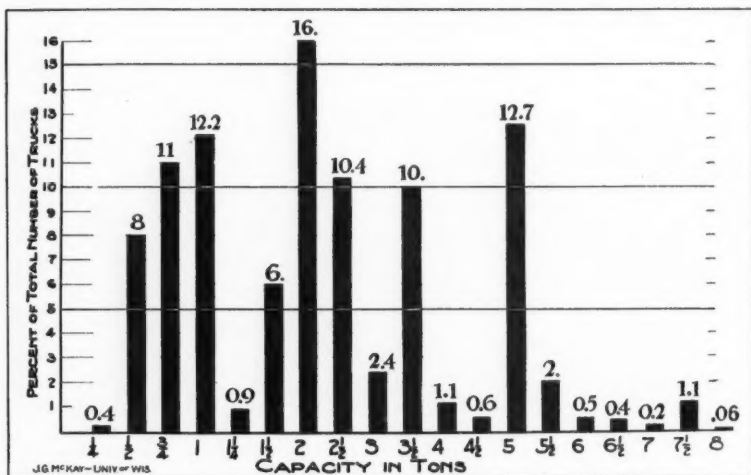
Also that the program of highway construction and maintenance by States and counties be continued under the direction of qualified experts, with particular reference to the construction and maintenance of farm-to-market roads; that adequate funds should be appropriated for research and regulation of traffic based upon the facts so ascertained.

Also that the several States cooperate in effecting a uniform basis for taxing motor trucks and other motor vehicles, which shall fairly represent the proportion of expense of highway construction and maintenance chargeable to such vehicles.

Previous to its appearance, the economic

zone of transportation was sharply defined by the haulage range of the horse and the cost of such transportation. It will be shown in the report that in 1918 the estimated cost of hauling in wagons from farms to shipping point averaged about 30¢ per ton mile for wheat, 33¢ for corn and 48¢ for cotton. Hauling in motor truck or by tractors the averages are 15¢ for wheat and corn and 18¢ for cotton. In the same year wagon hauling averaged 9 miles from farm to shipping point and motor truck hauls 11.3 miles; the motor truck averaged 3.4 round trips per day over its longer route, while wagons made 1.2 round trips per day.

It thus appears that the major result accomplished by this new form of transportation has been to extend and broaden the markets of the farmer. Single reactions are to be found in the fact that the use of the motor vehicle has brought the farmer closer to the city and also has increased the desirability and comfort of farm life.—Hon. Sydney Anderson, Chairman Joint Commission on Agricultural Inquiry.



Analysis of comparative use of motor trucks of different capacities, as checked during a four weeks census on two main interstate highways of Connecticut. Survey by U. S. Bureau of Public Roads, under the direction of Prof. J. G. Mc Kay of the University of Wisconsin. Further details are given below.

Interstate Car and Truck Traffic in Connecticut

Daily Average Motor Cars 6,739—Motor Trucks 792 on Two Main Highways—Peak of Passenger Traffic at 5 P. M.
Freight Haulage Heaviest at 4 P. M.

(Results of 1st and 2nd Connecticut Census by U. S. Bureau of Public Roads. 1st on August 16-29, 1921, on the Hartford-Springfield Road at the Massachusetts-Connecticut line. 2nd on October 3-16 on the Boston Post Road at Greenwich, Conn., on the New York-Connecticut line.)

AVERAGE HOURLY TRAFFIC First and Second Connecticut Census 1921

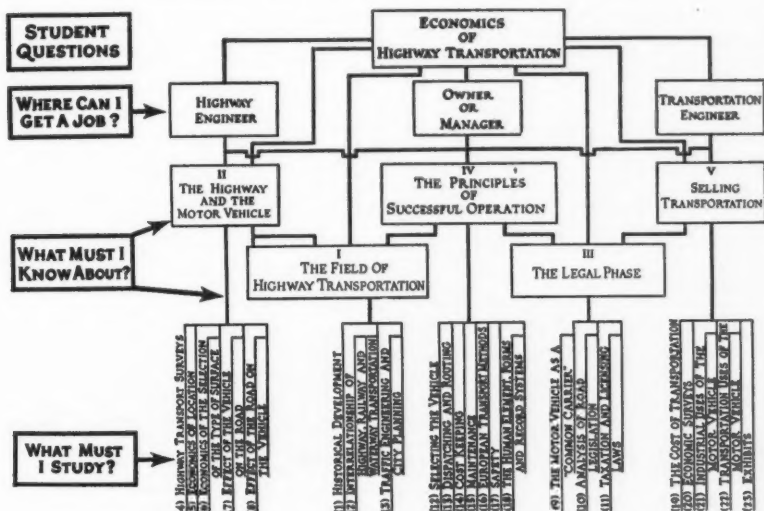
A. M.		12	1	2	3	4	5	6	7	8	9	10	11
No. of Motor Trucks.....	1st census	0	5	5	9	8	7	11	19	23	21	20	19
	2d census	7	5.5	4.5	5.5	9.5	12.5	21	28.5	31	35	35	3
Total No. of Motor Trucks		7	10.5	9.5	14.5	17.5	19.5	32	47.5	54	56	55	51
No. of Passenger Cars.....	1st census	11	11	1	17	15	30	70	106	136	172	191	171
	2d census	50.5	18.5	9	6.5	7	7	34	101.5	165	237	283	285
Total No. of Passenger Cars		61.5	29.5	10	23.5	22	37	104	207.5	301	409	474	456

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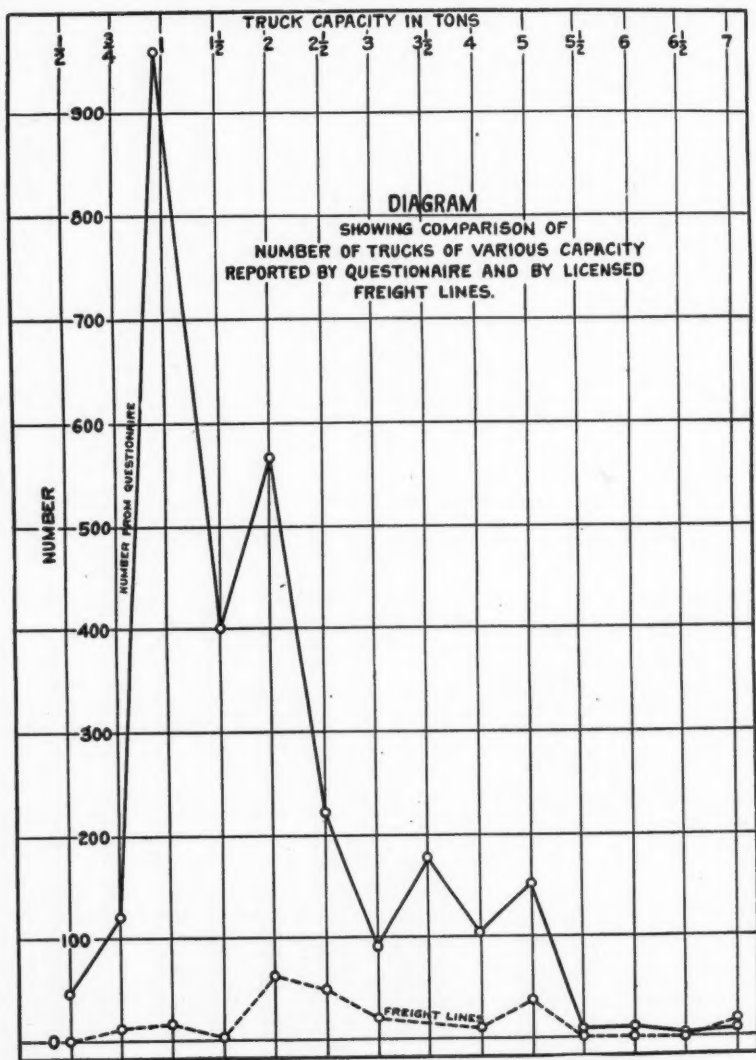
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AVERAGE HOURLY TRAFFIC													
P. M.		12	1	2	3	4	5	6	7	8	9	10	11
No. of Trucks.....	1st census	18	18	15	18	18	9	10	6	5	5	6	6
	2d census	29	36	36	37	45	36	21	17.6	6.5	5.5	10	5
Total No. of Motor Trucks		47	54	51	55	63	45	31	23.6	11.5	10.5	16	11
No. of Passenger Cars.....	1st census	182	232	247	232	230	225	215	176	126	55	31	19
	2d census	267	249	285	333	355	404	234	193.4	105.5	67.5	85	50
Total No. of Passenger Cars		449	481	532	565	585	629	449	369.4	231.5	122.5	116	69
Daily Average													
	1st census	Passenger Cars 2907					Trucks 281						
	2d census	Passenger Cars 3832.4					Trucks 511.6						
		Total.....					5739.4						
							792.6						

Economics of Highway Transportation



An idea of the economic importance of motor transportation may be realized from the above, from the Preliminary Topical Outline of the Economics of Highway Transport prepared for students by Prof. Lewis W. McIntyre, University of Pittsburgh, published by Highway and Highway Transport Education Committee, Washington, D. C.



This survey of trucks on California highways indicates a large use of the light truck by the individual and a preference for heavier vehicles by motor transport lines. Chart from Study of California Highway System, by U. S. Bureau of Public Roads.

25,679,300 Tons of Farm Products Hauled Over California Highways Annually

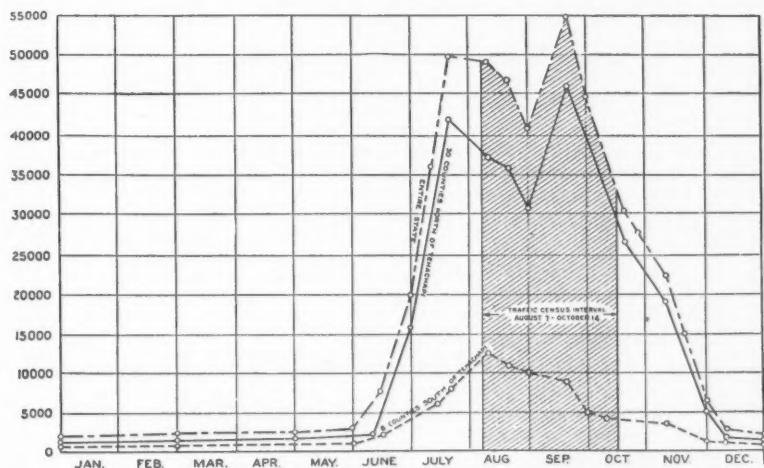


Chart shows agricultural tonnage haulage in California as estimated by the U. S. Bureau of Public Roads and the California Highway Commission. Shaded portion represents the period when actual highway census was taken at 103 stations

Farm to Market Motor Truck Haulage in California

(These figures from the U. S. Bureau of Public Roads, Study of the California Highway System are the result of 2,402 answers to questionnaires. The tables are useful, therefore, not as grand totals but as averages, and to show relative importance of products.)

TO MARKET

Class	Number reporting	Aggregate load in lbs.
Garden Truck.....	312	1,444,885
Fruits of All Kinds.....	438	1,763,225
Cereals, Hay, Feed.....	329	1,729,910
Cotton.....	2	4,500
Meat and Livestock.....	95	289,950
Dairy Products.....	131	461,128
Poultry and Eggs.....	11	18,800
Honey and Bee Products.....	18	45,750
Fuel Wood.....	81	315,850
Totals.....	1,417	6,073,998

AWAY FROM MARKET

Class	Number reporting	Aggregate load in lbs.
Groceries, Provisions and General Merchandise..	187	631,900
Drygoods and Laundry..	7	10,250
House Furnishings.....	103	267,900
Building Materials and Machinery of All Kinds	500	2,777,150
Seed and Nursery Stock..	16	46,400
Ice.....	51	173,700
Soft Drinks, etc.....	44	164,300
Freight.....	32	107,820
Gasoline and Oil.....	45	211,700

Totals..... 985 4,391,120

Ratio of inbound to outbound load.....1.44
Average load.....2.1 tons

**FUNDS EXPENDED
FOR
CONSTRUCTION OF ROAD BED
AND
INVESTMENT IN MOTORIZED
HIGHWAY ROLLING STOCK**

TRUCKS VALUED AT \$1500 EACH
AUTOMOBILES VALUED AT \$750 EACH

1910 I

ROAD CONSTRUCTION \$95,000,000

1910 ■

MOTOR VEHICLE INVESTMENT \$386,250,000

1910-16 ■■■■

INCLUSIVE

ROAD CONSTRUCTION \$1,056,000,000

1916 ■■■■■■

MOTOR VEHICLE INVESTMENT \$2822,250,000

1910-21 ■■■■■■

INCLUSIVE

ROAD CONSTRUCTION \$2,526,000,000

1921 ■■■■■■■■■■

MOTOR VEHICLE INVESTMENT \$8,322,000,000

PREPARED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS

The rapid increase in motor vehicle investment indicates the need for a continuous highway development in order that the public may operate the motor equipment of the country with maximum economy. The U. S. Bureau of Public Roads in conjunction with the various state highway authorities broke all road building records in 1921, constructing over 12,000 miles of federal aid highways.

Status of Federal Aid Road Construction

As of December 31, 1921

(Figures from U. S. Bureau of Public Roads)

STATES	Federal Aid Apportioned 1917 to 1922, Inc.	Projects under Construction			Projects on Which Construction is Completed		
		Total Estimated Cost	Federal Aid	Miles	Total Estimated Cost	Federal Aid	Miles
Alabama	\$7,329,973	\$3,524,610	\$1,744,581	258	\$3,017,915	\$1,421,487	319
Arizona	4,824,633	3,766,419	1,689,833	172	3,235,997	1,571,946	176
Arkansas	5,874,072	6,482,718	2,505,574	555	5,148,080	1,710,680	438
California	10,846,453	8,450,358	4,204,870	383	5,368,214	2,585,559	266
Colorado	6,121,240	3,541,796	1,750,987	229	3,518,913	1,683,832	209
Connecticut	2,170,222	2,461,879	932,075	48	439,722	210,030	17
Delaware	813,280				1,825,905	447,655	34
Florida	4,036,938	5,350,259	2,578,862d	157	482,729	230,602	34
Georgia	9,405,536	5,165,844	2,321,286	493	11,017,390	4,987,772	633
Idaho	4,298,926	297,674	148,837	16	6,472,552	3,053,113	407
Illinois	15,270,548	949,328	411,499	30	24,608,958	11,221,464	723
Indiana	9,374,148	4,169,554	2,025,354	109	3,327,962	1,638,888	87
Iowa	10,042,216	10,216,610	4,122,224d	999	7,969,981	3,030,288	422
Kansas	9,997,591	16,200,237	4,701,463	472	6,139,429	1,787,153	139
Kentucky	6,787,243	5,616,937	2,725,705	223	3,345,945	1,623,131	161
Louisiana	4,739,514	4,662,545	2,063,349	355	3,430,702	1,588,989	315
Maine	3,341,124	3,971,516	1,946,287	107	1,406,497	673,286a	55
Maryland	3,031,378	1,177,374	538,280d	33	3,752,233	1,787,418a	138
Massachusetts	5,148,741	2,212,799	878,471	40	4,391,036	1,833,633	121
Michigan	10,210,828	8,134,708	3,873,664	276	4,735,889	2,255,076	211
Minnesota	9,938,980	10,055,757	3,968,403	791	10,005,369	3,878,663	1,067
Mississippi	6,246,449	5,988,328	2,891,959	464	1,975,606	960,659	196
Missouri	11,770,204	10,323,085	4,677,477	535	972,925	409,997	101
Montana	7,045,713	4,339,406	2,141,019	413	3,754,551	1,829,731	312
Nebraska	7,447,951	5,676,420	2,822,049	914	3,627,767	1,735,763	683
Nevada	4,480,713	1,070,142	532,180	64	1,954,326	907,698	132
New Hamp.	1,508,714	354,536	173,891	19	1,920,814	925,458	120
New Jersey	4,208,170	1,835,565	480,942	24	3,442,224	1,313,557	78
New Mexico	5,579,618	3,308,564	1,654,282	552	1,863,691	930,021	203
New York	17,385,250	14,654,914	6,241,719	348	1,653,496	749,988	44
N. Carolina	7,980,025	7,447,373	3,587,161d	507	5,641,733	2,535,305	419
N. Dakota	5,387,202	5,371,416	2,665,835	810	1,434,375	677,325	346
Ohio	13,025,952	12,000,913	3,937,891	298	12,475,569	4,064,780	370
Oklahoma	8,090,585	8,695,827	3,726,766	308	1,404,461	668,565a	50
Oregon	5,514,842	1,926,514	935,092	77	7,176,286	3,353,691a	394
Pennsylvania	16,031,598	15,364,761	4,945,954	249	19,002,504	7,497,510	390
Rhode Island	1,006,791	280,815	87,331	7	1,311,690	550,080	32
S. Carolina	5,007,855	4,330,938	2,043,146	411	3,099,979	1,431,709	303
South Dakota	5,656,943	6,407,230	3,158,607	689	1,467,029	729,039d	149
Tennessee	7,875,830	11,643,785	5,812,775	449	37,350	18,675	.....
Texas	20,525,577	21,936,132	7,896,282c	1,382	11,143,678	4,582,016a	1,116
Utah	3,966,624	3,014,368	1,504,870	250	449,001	223,481	20
Vermont	1,607,729	1,030,755	514,883	38	325,311	159,103	15
Virginia	6,908,559	4,640,001	2,290,729d	202	3,141,733	1,542,181a	207
Washington	5,075,386	1,156,391	169,100	23	8,081,285	3,777,453	355
W. Virginia	3,724,864	4,663,694	2,104,764d	224	1,533,541	705,806	77
Wisconsin	8,899,097	8,212,545	3,234,223	539	6,702,100	2,381,355	501
Wyoming	4,313,176	3,568,764	1,697,159	293	2,505,267	1,172,573	323
Totals	\$339,875,000	\$275,652,104	\$117,049,690	15,834	\$221,739,710	\$95,054,184	12,907

NOTE: a—Reduction due to payment of final vouchers. b—Correction. c—Reduction due to withdrawal or cancellation of projects. d—Difference due to revision of project statement or agreement estimates.

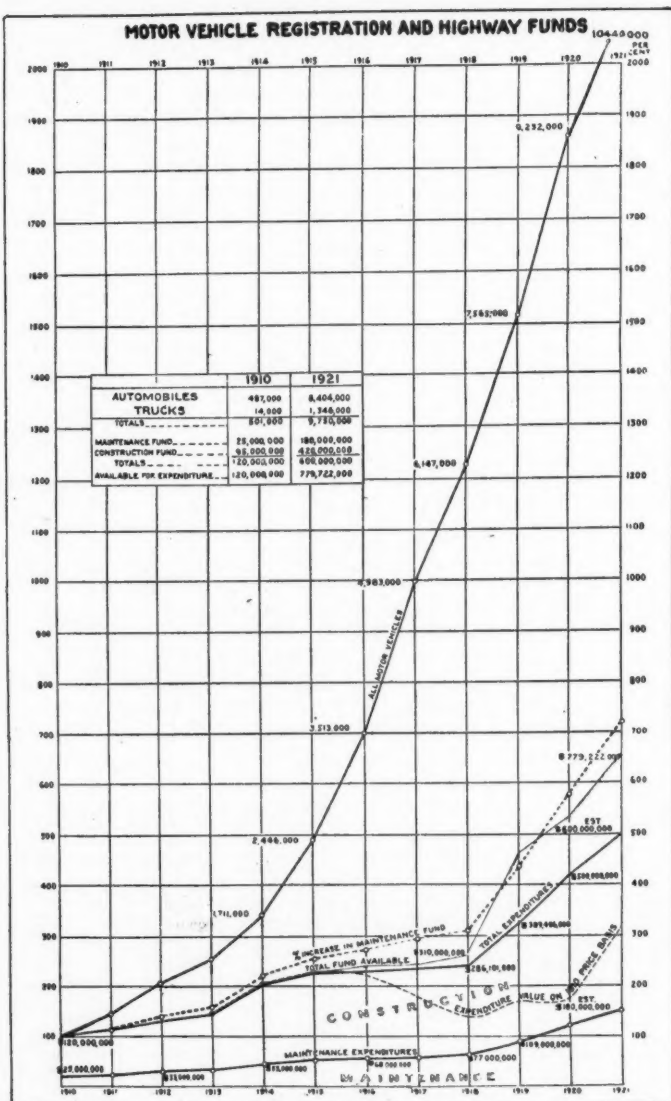


Chart from U. S. Bureau of Public Roads
 An encouraging feature of the highways program is seen in the second curve from the bottom which shows a marked increase in the purchasing value of the dollar during 1921.

Federal Aid Highway Apportionments

(From U. S. Bureau of Public Roads)

State	Total Apportionment under New Act	Total Apportionment under Old Act	Total Apportionments Now Available	Total Apportionments under New and Old Acts
Alabama.....	\$1,553,420.67	\$5,776,552.58	\$6,294,359.47	\$7,329,973.25
Arizona.....	1,053,281.44	3,771,351.69	4,122,445.50	4,824,633.13
Arkansas.....	1,254,142.20	4,619,929.47	5,037,976.87	5,874,071.67
California.....	2,462,098.53	8,384,354.57	9,205,064.08	10,846,453.10
Colorado.....	1,341,175.69	4,780,064.14	5,227,122.70	6,121,239.83
Connecticut.....	480,897.78	1,689,324.70	1,849,623.96	2,170,222.48
Delaware.....	365,625.00	447,654.83	569,529.83	813,279.83
Florida.....	886,825.69	3,150,112.48	3,445,721.04	4,036,938.17
Georgia.....	1,997,957.58	7,407,578.62	8,073,564.48	9,405,536.20
Idaho.....	938,536.68	3,360,388.86	3,673,234.42	4,298,925.54
Illinois.....	3,246,281.07	12,024,266.97	13,106,360.66	15,270,548.04
Indiana.....	1,958,855.41	7,415,292.61	8,068,244.41	9,374,148.02
Iowa.....	2,102,872.74	7,339,343.14	8,640,300.72	10,042,215.88
Kansas.....	2,102,281.51	7,895,309.07	8,596,069.57	9,997,590.58
Kentucky.....	1,417,178.68	5,370,064.79	5,842,457.68	6,787,243.47
Louisiana.....	996,989.64	3,742,524.57	4,074,854.45	4,739,514.21
Maine.....	695,160.25	2,645,963.57	2,877,683.65	3,341,123.82
Maryland.....	640,629.01	2,390,749.07	2,604,292.07	3,031,378.08
Massachusetts.....	1,096,176.04	4,052,565.09	4,417,957.10	5,148,741.13
Michigan.....	2,249,532.43	7,961,295.55	8,711,139.69	10,210,827.98
Minnesota.....	2,123,597.07	7,815,383.02	8,523,248.71	9,938,980.09
Mississippi.....	1,294,906.22	4,951,542.29	5,383,177.70	6,246,448.51
Missouri.....	2,448,128.62	9,322,075.71	10,138,118.58	11,770,204.33
Montana.....	1,546,885.82	5,498,827.31	6,014,455.92	7,045,713.13
Nebraska.....	1,581,189.50	5,866,761.66	6,393,824.83	7,447,951.16
Nevada.....	953,436.78	3,527,276.18	3,845,068.44	4,480,712.96
New Hampshire.....	365,625.00	1,143,088.99	1,264,963.99	1,508,713.99
New Jersey.....	942,870.95	3,265,299.02	3,579,589.34	4,208,169.97
New Mexico.....	1,189,823.34	4,389,794.61	4,786,402.39	5,579,617.95
New York.....	3,696,447.97	13,688,801.67	14,920,950.99	17,385,249.64
North Carolina.....	1,709,333.90	6,270,690.68	6,840,468.65	7,980,024.58
North Dakota.....	1,164,714.42	4,222,487.70	4,610,725.84	5,387,202.12
Ohio.....	2,823,004.05	10,202,947.71	11,143,949.06	13,025,951.76
Oklahoma.....	1,752,339.44	6,338,245.60	6,922,358.75	8,090,585.04
Oregon.....	1,182,663.90	4,332,178.26	4,726,399.56	5,514,842.16
Pennsylvania.....	3,398,953.97	12,632,644.29	13,765,628.95	16,031,598.26
Rhode Island.....	365,625.00	641,166.13	763,041.13	1,006,791.13
South Carolina.....	1,061,237.34	3,946,617.50	4,300,363.28	5,007,854.84
South Dakota.....	1,204,060.31	4,452,883.04	4,854,236.48	5,656,943.35
Tennessee.....	1,647,692.24	6,228,137.98	6,777,368.73	7,875,830.22
Texas.....	4,425,172.41	16,100,404.77	17,575,462.24	20,525,577.18
Utah.....	849,417.21	3,117,206.38	3,400,345.45	3,966,623.59
Vermont.....	365,625.00	1,242,103.73	1,363,978.73	1,607,728.73
Virginia.....	1,456,828.47	5,451,730.28	5,937,339.77	6,908,558.75
Washington.....	1,103,709.77	3,971,675.83	4,339,579.09	5,075,385.60
West Virginia.....	802,359.77	2,922,504.45	3,189,957.71	3,724,864.22
Wisconsin.....	1,894,815.86	7,004,280.67	7,635,885.96	8,899,096.53
Wyoming.....	934,617.63	3,378,558.17	3,690,097.38	4,313,175.80
Totals.....	73,125,000.00	266,750,000.00	291,125,000.00	339,875,000.00

C. A. Phelan, Gen. Mgr., Missouri & North Arkansas Railroad, says:

"There is no question but what the motor truck is a great asset in the handling of freight to and from the railroads

to the interior country, and there is an opportunity for considerable development along such lines in this country."

10,448,632 Motor Vehicles

1,237,327 Gain During

Largest State Registration, New York, 779,344.

Largest State Gross Gain, Pennsylvania, 119,425.

Greatest State Percentage Gain, Florida, 33 per cent.

Revenues from Licenses and Fees, \$122,478,000.

TABULATION BY STATES OF MOTOR VEHICLE REGISTRATIONS

(Figures from Bureau of Public Roads.)

State	Total Car and Truck Registration	Passenger Cars	Trucks and Commercial Cars	Taxis and Buses	Trailers	Motor Cycles
Alabama.....	82,366	69,422	9,110	3,834	.....	810
Arizona.....	35,049	31,069	3,980	562	.....	440
Arkansas.....	67,408	66,480	928(b)	.....	4	174
California.....	663,251	645,522	17,729	.....	.....	35,092
Colorado.....	145,739	136,336	9,403	.....	45	2,868
Connecticut.....	132,804	108,692	24,112	1,337	.....	5,282
Delaware.....	21,413	21,413(a)	.....	.....	67	541
District of Columbia...	40,625(d)	33,654	5,177	1,794	.....	1,101
Florida.....	97,957	83,111	14,846	.....	.....	1,296
Georgia.....	131,976	131,976(a)	.....	.....	.....	1,232
Idaho.....	51,294	46,935	4,359	.....	.....	744
Illinois.....	663,348	583,441	79,907	.....	.....	8,898
Indiana.....	400,342	357,025	43,317	.....	1,851	7,524
Iowa.....	461,084	430,118	30,966	.....	344	3,897
Kansas (i).....	289,539	267,891	21,648	.....	.....	2,271
Kentucky.....	126,802	110,602	15,025	1,175	.....	.....
Louisiana.....	77,885	67,311	10,574	.....	.....	479
Maine.....	77,527	67,591	9,936	.....	.....	1,525
Maryland.....	136,249	120,231(l)	11,597(m)	4,421	.....	5,271
Massachusetts.....	360,732	305,471	55,261	.....	472	12,048
Michigan.....	476,452	426,687	49,765	.....	4,330	6,195
Minnesota.....	323,475(o)	299,100	24,375	.....	820	3,150
Mississippi.....	65,039	65,039(a)	.....	.....	.....	.....
Missouri.....	346,437	346,437(a)	.....	.....	.....	3,609
Montana.....	58,785	58,785(a)	.....	.....	.....	472
Nebraska.....	238,704	219,781	18,923(p)	.....	322	1,866
Nevada.....	10,821	10,000(q)	821	.....	.....	131
New Hampshire.....	42,039	36,994	5,045	.....	.....	2,358
New Jersey.....	272,994	248,477	24,517	.....	857	9,724
New Mexico.....	22,559	21,155	1,404	.....	.....	152

(a) Includes motor truck registrations.

(b) Trucks registered since May 1, others included under passenger cars.

(d) Does not include 8,439 non-resident passenger cars and 1,023 non-resident trucks.

(i) For period July-December inclusive.

(l) Includes approximately 12,000 non-resident passenger cars.

(m) Includes approximately 2,000 non-resident trucks.

(o) Does not include 1,752 cars and trucks owned by States, cities and counties.

(p) Includes motor bus registrations.

(q) Does not include 179 cars owned by State and cities.

(Continued on

cles—New Registration Record ring, 1921 is 13% Increase

California has 1 Motor Vehicle to every 5.16 Persons.
Per Cent World's Registration in U. S.—83%
Persons per Motor Vehicle, U. S.—11.
Motor Vehicles per 1000 Population, U. S.—99.

IONS Roads, LICENSES, REVENUES FOR CALENDAR YEAR 1921.

U. S. Department of Agriculture)

	Re-registrations or Transfers	Total Gross Motor Vehicle Registration and License Revenues	Gross Revenues from Gasoline Tax	By or Under State Highway Department	Under Direction of Local Authorities	State
Motor cycles 810		\$1,147,265.00		\$917,812.00		Alabama
440	1,638	195,969.75	\$87,928.35	195,969.75		Arizona
174		856,543.60	170,000.00(e)	256,963.08	\$599,580.52	Arkansas
5,092		6,834,089.52		3,018,192.36	3,018,192.36	California
2,868	10,883	906,059.27	559,472.22	410,158.10	410,158.10	Colorado
5,282	18,425	2,129,861.12	176,489.47(g)	2,129,861.12		Connecticut
541		375,469.00(c)		375,469.00		Delaware
1,101		209,583.00				District of Columbia
2,296	2,483	734,845.50	283,867.15(x)	570,401.51		Florida
2,232	2,232	1,705,941.24	302,157.82(f)	1,705,941.24		Georgia
744	931	841,212.93		210,303.23	630,909.70	Idaho
2,898		6,803,556.21(c)		6,776,781.17		Illinois
5,524		2,422,227.00		2,281,276.00		Indiana
2,897	112,994	7,719,127.47		7,217,384.19(h)		Iowa
2,271	4,393	1,400,000.00		1,400,000.00(j)		Kansas
479		1,771,887.02	411,938.95	1,771,887.02		Kentucky
5,525		453,276.00		453,276.00		Louisiana
2,271	7,949	1,004,750.25		496,460.64(k)		Maine
2,048	11,085	2,460,162.04		1,750,000.00		Maryland
2,195	45,000	4,717,389.30		4,717,389.30(n)		Massachusetts
1,150	42,996	6,751,924.51		3,135,040.24	3,126,456.14	Michigan
1,609	15,900	5,672,424.61		5,672,424.61		Minnesota
472		751,946.63		649,345.44		Mississippi
2,866	17,850	2,505,353.90		2,505,353.90		Missouri
131	650	594,520.50	228,799.33(e)	274,016.52	274,016.52	Montana
358	16,920	2,824,811.25		2,116,746.94	705,582.31	Nebraska
724	156	102,800.00		97,200.00	600.00	Nevada
152	6,045	876,322.14		790,129.36		New Hampshire
	52,849	3,974,063.75		3,733,686.42		New Jersey
	500	198,632.77		194,051.79		New Mexico

ident (c) To pay interest and principal on State High-
way Bonds.

owned (e) For period May-December inclusive.

State (f) For period August 10 to December 31 in-
clusive.

and on (g) For period September-December inclusive.

(h) To State primary road fund.

(n) Devoted to road work in accordance with
appropriations by Legislature.

(j) Devoted to State Aid and special road
fund.

(k) Does not include about \$500,000 used to pay
interest and principal on State Highway
Bonds.

(x) Period June 20-December inclusive.

two following pages)

Motor Vehicle Registrations,

Continued from

State	Total Car and Truck Registration	Passenger Cars	Trucks and Commercial Cars	Taxis and Buses	Trailers	Motor Cycles
New York(r).....	779,344	630,791	148,553	32,687	3,213	26,998
N. Carolina(i).....	148,627	134,884	13,743	.....	.....	1,274
N. Dakota.....	92,644	90,221	2,423	.....	.....	811
Ohio.....	720,634(t)	622,044	98,590	.....	4,801	17,203
Oklahoma.....	221,300	221,300(a)	.....	.....	.....	1,013
Oregon.....	118,095	103,735	14,360(u)	103	290	3,164
Pennsylvania.....	689,589	632,541	57,048	.....	951	21,111
Rhode Island.....	53,355	43,662	9,693	1,253	41	1,751
S. Carolina.....	89,836	82,993	6,843	.....	59	.....
S. Dakota.....	119,274	110,997	8,277	.....	.....	.....
Tennessee.....	117,025	102,795	14,230	.....	.....	1,043
Texas.....	467,616	467,616(a)	.....	.....	.....	3,906
Utah.....	50,185	40,562	9,623	.....	.....	909
Vermont.....	37,265	33,778(v)	3,487	.....	.....	965
Virginia.....	139,200	122,000	17,200	.....	.....	2,100
Washington.....	185,359	154,239	27,739(w)	3,381	797	3,913
West Virginia.....	93,940	77,397	16,543	.....	.....	1,539
Wisconsin.....	341,841	320,577	21,264	.....	.....	6,423
Wyoming.....	26,866	23,966	2,900	.....	.....	322
Totals.....	10,448,632	9,432,844	965,241	50,547	19,264	214,781

(a) Includes motor truck registrations.

(i) For period July-December inclusive.

(r) 11 months, February-December inclusive.

(t) Does not include 2,800 cars and trucks owned by State, cities and counties.

(u) Includes 5,223 commercial vehicles of less than 1 ton cap.

(v) Does not include 490 cars and trucks owned by State and cities.

(w) Does not include 1,891 State vehicles.

(Registration by years on page 50)

U. S. Postal Service Puts Motor Equipment in 42 Additional Cities in 1921.

Total Cities now, 262

Total motor trucks, 3,580

Average pay of carrier on horse-drawn route.....	\$1,830
Average pay of carrier on motor vehicle route.....	2,570

TEN CITIES USING BIGGEST MOTOR POSTAL EQUIPMENT

Post Office	No. Trucks	Post Office	No. Trucks
Chicago, Ill.....	421	St. Louis, Mo.....	108
New York, N. Y.....	318	Detroit, Mich.....	95
*Brooklyn, N. Y.....	125	Cincinnati, Ohio.....	94
Boston, Mass.....	193	Pittsburgh, Pa.....	83
Philadelphia, Pa.....	193	Cleveland, Ohio.....	70
Washington, D. C.....	111		

*A Borough of Greater New York, but having a separate Post Office.

Licenses, and Revenues, for 1921

two preceding pages)

Re-registrations or Transfers	Total Gross Motor Vehicle Registration and License Revenues	Gross Revenues from Gasoline Tax	By or Under State Highway Department	Under Direction of Local Authorities	State
.....	\$10,288,858.25	.....	\$7,716,643.69	\$2,572,214.56	..... New York
.....	2,259,240.43	\$506,018.76(a)	2,259,240.43	.....	..... N. Carolina
6,261	683,052.45	.....	201,526.23	201,526.23	..... N. Dakota
32,878	6,894,159.73	.....	3,250,125.45	3,456,355.45	..... Ohio
.....	2,619,713.49	.....	.....	2,354,549.43	..... Oklahoma
.....	2,334,931.25	935,126.24	1,665,000.00	555,000.00	..... Oregon
75,559	9,470,174.31	835,325.64(g)	9,470,174.31	.....	..... Pennsylvania
7,593	848,723.59	.....	764,483.16	.....	..... Rhode Island
1,394	741,114.79	.....	587,056.07	.....	..... S. Carolina
.....	720,587.00	.....	.....	648,528.30	..... S. Dakota
6,309	1,387,870.10	.....	661,655.46	661,655.46	..... Tennessee
113,809	3,806,395.25	.....	1,865,079.58	1,852,562.49	..... Texas
.....	441,359.88	.....	432,959.82	.....	..... Utah
4,196	668,288.50	.....	618,288.50	.....	..... Vermont
10,100	2,021,146.09	.....	1,970,702.00	.....	..... Virginia
12,727	3,140,730.74	471,847.53	2,800,030.74	.....	..... Washington
12,000	1,250,525.82	.....	1,250,525.82	.....	..... West Virginia
17,153	3,671,645.50	.....	2,568,109.13	856,036.37	..... Wisconsin
609	288,121.88(c)	.....	288,121.88	.....	..... Wyoming
662,364	\$122,478,654.33	\$4,968,971.46	\$94,193,243.00	\$21,923,923.94	Totals

(c) To pay interest and principal on State Highway bonds.

(g) For period September-December inclusive.

(a) Period March-December inclusive.

(Revenues by years on page 51)

Truck and Commercial Car Registration by Sizes

(From U. S. Bureau of Public Roads)

CARRYING CAPACITY IN TONS

State	1 ton or less	1 to 3	3 to 5	5 to 8	Total
Maine.....	8,185	1,145	175	6	9,511
Oregon.....	5,223	8,002	1,135	..	14,360
S. Carolina.....	5,227	1,891	79	..	7,197
Utah.....	5,200	965	698	60	6,923
Wisconsin.....	16,778	3,152	1,334	..	21,264
N. Mexico.....	1,044	301	58	1	1,404
Totals.....	41,657	15,456	3,479	67	60,659

NOTE—Only a few states register trucks by classified sizes. The above states from various sections of the country give some idea of the relative proportion of different sizes in use.

\$341,300,000

**Motor Vehicle Payments Into
Public Treasuries in 1921**

FEDERAL

1. Passenger Car	
Excise Taxes.....	\$64,388,000
2. Commercial Vehicle	
Excise Taxes.....	11,640,000
3. Parts, Accessories, Tires	
Excise Taxes.....	39,518,000
4. Common Carrier	
Tax on Passenger Cars for Hire†.....	1,776,000
	<hr/>
	\$117,322,000

STATE

1. License Fees.....	\$122,478,000
2. Personal Property Taxes*.	75,000,000
(38 states and D. of C.)	
3. Gasoline Taxes*.....	10,500,000
(15 states)	
4. Miscellaneous Taxes*.....	5,000,000
(Motor Transportation Franchise Taxes; Mileage Taxes; Business Taxes on Manufacturers and Dealers.)	<hr/>
	\$212,978,000

MUNICIPAL

1. Local License Fees*.....	\$11,000,000
(Wheel Taxes; Motor Fuel Taxes; Motor Transportation Franchise Taxes.)	<hr/>
	\$11,000,000

Grand Total - - - - - \$341,300,000

*Conservative estimates based on careful analysis of factors involved.

†Figure for fiscal year.

A Tax on Motor Vehicles is
A Tax on Essential Transportation

Three million cars and trucks are owned on farms.

Motor cars carry annually six times as many passengers as the steam railroads.

Motor trucks carry 1,430,000,000 tons of freight annually, or 87% as much as the railroads.

Over 100,000 doctors use motor cars.

Over 135,000 suburban home owners depend chiefly on motor transportation.

Seventy per cent of all cars in use were purchased at less than \$1,000.

Ninety-four per cent of all cars in use were purchased at less than \$2,000.

"The motor car has become an indispensable instrument in our political, social and industrial life."—*President Harding*.

"I believe that the spread of the use of the automobile is going to do as much to teach one nation that another nation is made up of decent chaps and to cure them of their old rivalries and feuds and bitternesses as any other agency on God's green footstool can ever hope to do."—*Irvin S. Cobb*.

Motor Vehicle Registration† 1916-1921

(Figures from U. S. Bureau of Public Roads)

	1916	1917	1918	1919	1920	1921
Alabama.....	21,636	32,873	46,171	58,898	74,637	82,366
Arizona.....	12,300	19,890	23,905	28,979	34,601	35,049
Arkansas.....	15,000	28,693	41,458	49,450	59,082	67,408
California.....	232,440	306,916	407,761	(x)477,450	568,892	663,251
Colorado.....	43,296	87,460	83,244	104,865	129,255	145,739
Connecticut.....	56,048	74,645	86,067	102,410	119,134	132,804
Delaware.....	7,102	10,700	12,955	16,152	18,300	21,413
District of Columbia...	13,118	15,493	30,490	(c)35,400	34,161	(d)40,625
Florida.....	20,718	*27,000	54,186	55,400	73,914	97,957
Georgia.....	46,025	70,324	104,676	137,000	146,000	131,976
Idaho.....	12,999	24,731	32,289	42,220	50,861	51,294
Illinois.....	248,429	340,292	389,620	478,438	568,924	663,348
Indiana.....	139,065	192,194	227,160	227,255	333,067	400,342
Iowa.....	198,587	254,462	278,313	363,079	437,378	461,084
Kansas.....	112,122	159,343	189,163	227,752	294,159	289,539
Kentucky.....	31,500	47,420	65,884	90,008	112,683	126,802
Louisiana.....	17,000	28,394	40,000	51,000	73,000	77,885
Maine.....	30,972	41,499	40,372	53,425	62,907	77,527
Maryland.....	44,245	60,943	74,666	95,634	102,841	136,249
Massachusetts.....	136,809	174,274	193,497	247,182	274,498	360,732
Michigan.....	160,052	247,006	262,125	325,813	412,717	476,452
Minnesota.....	(b)46,000	(a)54,009	204,458	259,743	324,166	(o)323,475
Mississippi*.....	25,000	36,600	48,400	45,030	68,486	65,039
Missouri.....	103,587	147,528	188,040	244,363	297,008	346,437
Montana.....	25,105	42,749	51,053	59,324	60,650	58,785
Nebraska.....	101,200	148,101	173,374	200,000	219,000	238,704
Nevada.....	4,919	7,160	8,159	9,305	10,464	10,821
New Hampshire.....	17,508	22,267	24,817	31,625	34,680	42,039
New Jersey.....	109,414	141,918	155,519	190,873	227,737	272,594
New Mexico.....	8,228	14,086	17,647	18,082	22,100	22,559
New York.....	314,222	406,016	459,292	566,511	670,290	779,344
North Carolina.....	33,904	55,950	72,313	109,017	140,860	148,627
North Dakota.....	40,446	62,993	71,678	82,885	90,840	92,644
Ohio.....	252,431	346,772	412,775	511,031	621,390	(t)720,634
Oklahoma.....	52,718	100,199	121,500	144,500	212,880	221,300
Oregon.....	33,917	48,632	63,324	83,332	103,890	118,095
Pennsylvania.....	230,578	325,153	394,186	482,117	570,164	689,589
Rhode Island.....	21,406	37,046	35,218	44,833	50,477	53,355
South Carolina.....	*25,000	38,332	55,492	79,143	93,843	89,836
South Dakota.....	44,271	67,158	90,521	104,628	120,395	119,274
Tennessee.....	*30,000	48,000	63,000	80,422	101,852	117,025
Texas.....	*125,000	192,961	251,118	331,310	427,693	467,616
Utah.....	13,507	24,076	32,273	35,236	42,616	50,185
Vermont.....	15,671	21,633	22,553	26,807	31,625	37,265
Virginia.....	35,426	55,661	72,223	94,100	115,470	139,200
Washington.....	60,734	91,337	117,278	148,775	173,920	185,359
West Virginia.....	20,571	31,300	58,750	50,203	80,664	93,940
Wisconsin.....	115,645	158,637	196,253	236,290	293,298	341,841
Wyoming.....	7,125	12,523	16,200	21,371	33,926	26,866
Total.....	3,512,996	4,983,340	6,146,617	7,558,848	9,211,295	10,448,632

†Does not include motorcycles, or dealers' and manufacturers' licenses.

*Estimated.

†Total registered under perennial system.

(a)Cars registered 1917.

(b)Cars registered 1916.

(c)Does not include non-resident registrations.

(d)Does not include 8,439 non-resident passenger cars and 1,023 non-resident trucks.

(o)Does not include 1,752 cars and trucks owned by State, cities and counties.

(t)Does not include 2,800 cars and trucks owned by State, cities and counties.

(x)Does not include 10,000 cars operated under exempt licenses.

(z)Cars registered 1915.

Total Gross Motor Vehicle Revenues 1916-1921

(Figures from Bureau of Public Roads, U. S. Department of Agriculture)

	1916	1917	1918	1919	1920	1921
Alabama.....	\$ 203,655	\$217,700	\$470,274	\$541,348.70	\$835,178.00	\$1,147,265.00
Arizona.....	73,000	117,643	142,288	164,755.58	192,368.92	195,969.75
Arkansas.....	150,000	205,176	410,649	500,970.00	591,464.50	856,543.60
California.....	2,192,699	2,846,030	3,524,036	4,468,721.67	5,554,265.00	6,834,089.52
Colorado.....	197,795	296,808	379,559	490,432.31	819,872.74	906,059.27
Connecticut.....	768,728	1,080,757	1,285,164	1,516,136.01	1,852,591.00	2,129,861.12
Delaware.....	85,249	133,883	232,449	286,333.00	329,980.00	375,469.00c
District of Columbia.....	47,624	55,928	220,753	274,184.00	266,285.00	209,583.00
Florida.....	127,176	*170,000	345,775	401,317.40	554,695.14	734,845.50
Georgia.....	154,735	229,653	331,816	429,848.00	1,919,338.52	1,705,941.24
Idaho.....	213,758	412,641	576,555	729,702.94	882,034.51	841,212.93
Illinois.....	1,236,566	1,588,835	2,764,330	3,262,714.00	5,915,700.17	6,803,556.21c
Indiana.....	817,285	1,096,159	1,293,128	1,558,740.50	2,029,694.00	2,422,227.00
Iowa.....	1,776,170	2,249,655	2,547,596	3,077,445.81	7,507,202.08	7,719,127.47
Kansas.....	585,762	830,878	978,837	1,150,000.00	1,419,345.50	1,400,000.00
Kentucky.....	184,741	287,314	402,250	565,520.21	815,549.31	1,771,887.02
Louisiana.....	112,000	166,835	240,000	306,000.00	390,000.00	453,276.00
Maine.....	363,562	491,686	570,171	685,570.25	818,755.50	1,004,750.25
Maryland.....	565,302	807,395	1,189,984	1,776,410.22	2,121,924.84	2,460,162.04
Massachusetts.....	1,602,958	1,969,994	2,184,821	2,667,853.85	3,860,231.70	4,717,389.30
Michigan.....	1,739,344	2,471,271	2,875,266	3,719,433.39	5,754,900.96	6,751,924.51
Minnesota.....	82,469	100,000	1,076,811	218,469.50	143,794.50	5,672,424.61
Mississippi.....	175,000	250,000	335,000	400,000.00	800,000.00	751,946.63
Missouri.....	439,315	617,942	1,394,762	1,725,076.70	416,245.00	2,505,353.90
Montana.....	52,768	290,936	350,914	407,848.00	2,111,696.85	594,520.50
Nebraska.....	311,334	451,303	536,897	304,450.55	2,800,000.00	2,824,811.25
Nevada.....	20,116	31,166	31,083	37,550.75	103,318.33	102,800.00
New Hampshire.....	344,434	425,305	509,335	599,621.25	654,702.04	876,322.14
New Jersey.....	1,406,806	1,923,164	2,431,757	2,931,904.15	3,503,936.76	3,974,063.75
New Mexico.....	47,865	80,843	105,631	111,150.00	200,000.00	198,632.77
New York.....	2,658,042	4,284,144	4,945,298	5,984,659.50	8,511,597.00	10,288,858.25
North Carolina.....	206,101	321,823	394,739	1,313,950.73	1,785,000.00	2,259,240.43
North Dakota.....	125,283	211,536	471,429	636,842.40	691,500.00	683,052.45
Ohio.....	1,286,405	1,766,427	2,125,426	2,593,000.00	6,400,000.00	6,894,159.73
Oklahoma.....	555,011	853,659	1,102,380	1,178,130.27	2,500,000.00	2,619,713.49
Oregon.....	146,232	196,787	461,422	602,239.00	2,085,168.50	2,334,931.25
Pennsylvania.....	2,325,057	3,268,025	4,048,186	5,090,921.00	8,090,873.04	9,470,174.31
Rhode Island.....	264,737	346,117	385,608	477,223.25	531,462.75	848,723.59
South Carolina.....	10,000	113,557	300,217	389,034.68	527,868.13	741,114.79
South Dakota.....	140,746	210,592	282,742	322,340.50	784,000.00	720,587.00
Tennessee.....	186,953	322,200	390,000	585,181.95	1,215,776.04	1,387,870.10
Texas.....	20,000	858,978	2,039,589	2,624,334.29	3,510,355.97	3,806,395.25
Utah.....	93,494	170,707	229,203	291,325.96	350,933.29	441,359.88
Vermont.....	297,992	363,541	398,856	460,190.87	555,422.38	688,268.50
Virginia.....	271,266	518,566	684,636	900,000.00	1,822,736.16	2,021,146.09
Washington.....	350,052	519,526	875,391	2,325,323.53	2,828,896.10	3,140,730.74
West Virginia.....	198,436	359,339	447,705	1,008,083.31	1,280,193.28	1,250,525.82
Wisconsin.....	615,721	861,278	2,076,701	2,502,852.00	3,127,073.00	3,671,645.50
Wyoming.....	35,625	57,421	80,000	102,114.50	267,179.35	288,121.88c
Total.....	\$25,865,370	\$37,501,233	\$51,477,417	\$64,697,255.58	\$102,034,106.26	\$122,478,654.33

*Estimated.

†Registration law declared unconstitutional.

c To pay interest and principal on State Highway bonds.

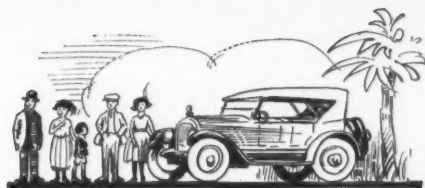
World Registration of Motor Vehicles

Totals 12,528,272

United States Has 83%. British Isles Second 497,532

(Figures from U. S. Bureau of Foreign and Domestic Commerce, Automotive Industries, and General Motors Corporation.)

Country	Date of Information	Total	Country	Date of Information	Total
Alaska.....	March 1922	490	Iceland & Faroe Islands.....	March 1922	145
Algeria.....	2/26/22	12,000	India.....	2/16/22	45,983
Angola.....	2/16/22	250	Indo-China.....	2/16/22	3,000
Arabia.....	March 1922	180	Ital. Somaliland.....	2/16/22	66
Argentina.....	2/16/22	70,000	Italy.....	2/16/22	53,000
Australia.....	2/16/22	81,000	Jamaica.....	2/16/22	2,100
Austria.....	Dec. 1921	19,300	Japan.....	Jan. 1922	12,260
Azores Islands.....	2/16/22	80	Jugoslavia.....	Dec. 1921	2,300
Bahama Islands.....	2/16/22	150	Liberia.....	March 1922	17
Barbados.....	2/16/22	1,000	Madagascar.....	2/16/22	159
Belgian Congo.....	March 1922	80	Madeira Islands.....	2/16/22	100
Belgium.....	2/16/22	18,500	Malta, Gozo & Cyprus Islands.....	March 1922	209
Bolivia.....	2/16/22	600	Mauritius.....	2/16/22	1,600
Brazil.....	2/16/22	18,500	Mexico.....	2/16/22	25,000
British E. Africa.....	Dec. 1921	1,000	Monrovia.....	2/16/22	3
British Guiana.....	Dec. 1921	1,050	Morocco.....	2/16/22	2,500
British Honduras.....	2/16/22	68	Netherlands.....	2/16/22	20,000
British So. Africa.....	2/16/22	31,000	Newfound. & Labrador.....	2/16/22	600
British W. Africa.....	2/16/22	1,000	New Zealand.....	2/16/22	37,500
Bulgaria.....	March 1922	3,300	Nicaragua.....	2/16/22	370
Canada.....	2/16/22	469,310	Norway.....	2/16/22	14,340
Canary Islands.....	2/16/22	881	Panama.....	2/16/22	1,950
Ceylon.....	2/16/22	5,350	Paraguay.....	2/16/22	500
Chile.....	2/16/22	10,000	Peru.....	2/16/22	3,900
China.....	2/16/22	8,150	Persia.....	March 1922	245
Chosen.....	March 1922	96	Philippines.....	2/16/22	15,000
Colombia.....	2/16/22	2,500	Poland.....	2/16/22	10,700
Costa Rica.....	2/16/22	200	Porto Rico.....	2/16/22	6,500
Cuba.....	2/16/22	32,000	Portugal.....	2/16/22	8,000
Czechoslovakia.....	2/16/22	4,133	Portugal E. Africa.....	2/16/22	400
Denmark.....	2/16/22	14,000	Reunion Island.....	2/16/22	35
Dominican Republic.....	2/16/22	1,800	Roumania.....	2/16/22	6,000
Dutch E. Indies.....	2/16/22	18,000	Russia.....	2/16/22	35,000
Dutch Guiana.....	March 1922	135	Salvador.....	2/16/22	500
Dutch W. Indies.....	March 1922	243	Siam.....	2/16/22	1,500
Ecuador.....	2/16/22	625	Siberia.....	March 1922	3,237
Egypt.....	2/16/22	5,084	Spain.....	2/16/22	41,000
Federal Malay States.....	2/16/22	8,000	Str. Settlements.....	March 1922	7,000
Finland.....	Dec. 1921	2,000	Sweden.....	2/16/22	14,250
France.....	2/16/22	236,148	Switzerland.....	2/16/22	18,011
French Guiana.....	March 1922	110	Trinidad & Tobago.....	2/16/22	2,221
French Indo-China.....	Dec. 1921	3,000	Tripoli.....	Dec. 1921	700
French W. Indies.....	Dec. 1921	1,000	Tunis.....	2/16/22	1,990
French W. Africa.....	2/16/22	230	Turkey.....	2/16/22	5,500
Germany.....	2/16/22	60,000	Uruguay.....	2/16/22	10,000
Gibraltar.....	March 1922	105	Venezuela.....	2/16/22	2,800
Gold Coast.....	2/16/22	3,500	Virgin Islands.....	March 1922	309
Greece.....	Dec. 1921	2,500			
Guadeloupe.....	2/16/22	500			
Guatemala.....	2/16/22	500			
Great Britain & Ireland.....	2/16/22	497,532			
Haiti.....	March 1922	460			
Hawaii.....	2/16/22	12,500			
Honduras.....	2/16/22	200			
Hongkong.....	Dec. 1921	800			
			United States.....	Jan. 1, 1922	10,448,632



RATIO OF MOTOR VEHICLES TO POPULATION

State	No. of Persons per Motor Vehicle	Motor Vehicles per 1000 Pop.	State	No. of Persons per Motor Vehicle	Motor Vehicles per 1000 Pop.
California.....	5.16	193.5	Maine.....	9.90	100.9
Iowa.....	5.21	191.8	Texas.....	9.94	100.2
South Dakota.....	5.3	187.3	Connecticut.....	10.39	96.2
Nebraska.....	5.4	184.1	Delaware.....	10.4	96.0
Kansas.....	6.1	163.6	New Hampshire.....	10.5	94.8
Colorado.....	6.4	155.1	Maryland.....	10.6	93.9
Oregon.....	6.6	150.7	Massachusetts.....	10.7	93.6
North Dakota.....	6.9	143.2	District of Columbia..	10.8	92.84
Nevada.....	7.15	139.8	Rhode Island.....	11.3	88.2
Wyoming.....	7.2	138.2	New Jersey.....	11.56	86.5
Washington.....	7.3	136.63	Pennsylvania.....	12.6	79.08
Indiana.....	7.3	136.61	New York.....	13.3	75.04
Minnesota.....	7.4	135.5	West Virginia.....	15.6	62.8
Michigan.....	7.7	129.8	New Mexico.....	15.9	62.6
Wisconsin.....	7.7	129.8	Virginia.....	16.5	60.2
Ohio.....	7.9	125.1	North Carolina.....	17.2	58.07
Idaho.....	8.4	118.8	South Carolina.....	18.7	53.35
Utah.....	8.9	111.6	Kentucky.....	19.0	52.47
Oklahoma.....	9.2	109.1	Tennessee.....	19.9	50.05
Montana.....	9.3	107.1	Georgia.....	21.9	45.5
Vermont.....	9.4	105.7	Louisiana.....	23.1	43.3
Arizona.....	9.5	104.8	Arkansas.....	25.9	38.4
Illinois.....	9.7	102.28	Mississippi.....	27.5	36.32
Missouri.....	9.82	101.77	Alabama.....	28.5	35.0
Florida.....	9.88	101.14			

Millions Find Cars Indispensable

I should say from what I know of the farming situation that there are at least 9,000,000 people in the United States who cannot afford not to have automobiles.

Of course, this is an old story. I remember that when I was a youngster the same thing used to be said about horses. Nobody could afford to have a

horse unless he had such and such an income. Well, unfortunately, a farmer, to take him alone, had to have a horse, no matter what his income was. In many cases the horse had a better income than the farmer had. But the farmer had to have the horse.—*Arthur R. Marsh, Editor, Economic World.*

Numerical Increase in State Registrations

1921 Over 1920

Pennsylvania.....	119,425	Oklahoma.....	8,420
New York.....	109,054	Arkansas.....	8,326
Ohio.....	99,244	North Carolina.....	7,767
California.....	94,459	Utah.....	7,569
Illinois.....	94,424	New Hampshire.....	7,359
Massachusetts.....	86,234	Alabama.....	7,729
Indiana.....	67,275	District of Columbia.....	6,464
Michigan.....	63,735	Vermont.....	5,640
Missouri.....	49,429	Louisiana.....	4,885
Wisconsin.....	48,543	Delaware.....	3,113
New Jersey.....	45,257	Rhode Island.....	2,878
Texas.....	39,923	North Dakota.....	1,804
Maryland.....	33,408	New Mexico.....	459
Florida.....	24,043	Arizona.....	448
Virginia.....	23,730	Idaho.....	433
Iowa.....	23,706	Nevada.....	357
Nebraska.....	19,704	Minnesota.....	-691
Colorado.....	16,484	South Dakota.....	-1,121
Tennessee.....	15,173	Montana.....	-1,865
Maine.....	14,620	Mississippi.....	-3,447
Oregon.....	14,205	South Carolina.....	-4,007
Kentucky.....	14,119	Kansas.....	-4,620
Connecticut.....	13,670	Wyoming.....	-7,060
West Virginia.....	13,276	Georgia.....	-14,024
Washington.....	11,439		

Percentage Increase in State Registrations

1921 Over 1920

Florida.....	33%	West Virginia.....	16%
Maryland.....	32%	Wisconsin.....	16%
Massachusetts.....	31%	New York.....	16%
Maine.....	23%	Michigan.....	15%
New Hampshire.....	21%	Arkansas.....	14%
Virginia.....	21%	Tennessee.....	14%
Indiana.....	20%	Oregon.....	13%
Pennsylvania.....	20%	Colorado.....	12%
New Jersey.....	19%	Kentucky.....	12%
District of Columbia.....	18%	Connecticut.....	11%
Utah.....	18%	Alabama.....	10%
Vermont.....	18%	Nebraska.....	9%
California.....	17%	Texas.....	9%
Delaware.....	17%	Louisiana.....	7%
Illinois.....	16%	Washington.....	6%
Missouri.....	16%	Iowa.....	5%
Ohio.....	16%	North Carolina.....	5%

Rhode Island.....	5%	South Dakota.....	-9/10%
Oklahoma.....	4%	Kansas.....	-2%
Nevada.....	3%	Montana.....	-3%
New Mexico.....	2%	South Carolina.....	-4%
North Dakota.....	2%	Mississippi.....	-5%
Idaho.....	1%	Georgia.....	-9%
Arizona.....	1%	Wyoming.....	-20%
Minnesota.....	-2/10%		

States Rated According to Total Registration

1. New York.....	779,344	38. Montana.....	58,785
2. Ohio.....	720,634	39. Rhode Island.....	53,355
3. Pennsylvania.....	689,589	40. Idaho.....	51,294
4. Illinois.....	663,348	41. Utah.....	50,185
5. California.....	663,251	42. New Hampshire.....	42,039
6. Michigan.....	476,452	43. District of Columbia.....	40,625
7. Texas.....	467,616	44. Vermont.....	37,265
8. Iowa.....	461,084	45. Arizona.....	35,049
9. Indiana.....	400,342	46. Wyoming.....	26,866
10. Massachusetts.....	360,732	47. New Mexico.....	22,559
11. Missouri.....	346,437	48. Delaware.....	21,413
12. Wisconsin.....	341,841	49. Nevada.....	10,821
13. Minnesota.....	323,475		
14. Kansas.....	289,539		
15. New Jersey.....	272,994		
16. Nebraska.....	238,704		
17. Oklahoma.....	221,300		
18. Washington.....	185,359		
19. North Carolina.....	148,627		
20. Colorado.....	145,739		
21. Virginia.....	139,200		
22. Maryland.....	136,249		
23. Connecticut.....	132,804		
24. Georgia.....	131,976		
25. Kentucky.....	126,802		
26. South Dakota.....	119,274		
27. Oregon.....	118,095		
28. Tennessee.....	117,025		
29. Florida.....	97,957		
30. West Virginia.....	93,940		
31. North Dakota.....	92,644		
32. South Carolina.....	89,836		
33. Alabama.....	82,366		
34. Louisiana.....	77,885		
35. Maine.....	77,527		
36. Arkansas.....	67,408		
37. Mississippi.....	65,039		

Canadian Registration

Canada, with a population of nearly 9,000,000, has about 500,000 automobiles, or approximately 1 car to every 18 inhabitants, according to the report of the Government Bureau of Statistics.

"The most surprising increase," a provincial official asserts, "occurred in the western provinces. Saskatchewan, which but a comparatively short time ago was a playground for the buffalo, to-day has 62,958 motor vehicles, mostly automobiles. Manitoba has 40,430, Alberta 38,750, and British Columbia 31,000.

"Prosperity of western farmers in recent years has resulted in the increased use of all kinds of cars. Canada is taking advantage of this growing demand. Automobile production in Canada was valued at \$137,420,351 in 1920, an increase of \$37,000,000 in twelve months. Investment in the industry is placed at \$53,906,506.—*N. Y. Evening Post.*

Dealers and Service Stations

(Compiled as of Mar. 1, 1922, by Chilton Automobile Trade List)

State	Exclusive Pass. Car Dealers	Exclusive Truck Dealers	Pass. Car and Truck Dealers	Charging Stations	Garages	Service Stations and Repair Shops	Supplies	Number of Names
Alabama.....	90	14	191	88	410	515	507	705
Arizona.....	45	17	89	13	175	373	238	371
Arkansas.....	73	9	172	50	366	421	458	586
California.....	806	183	836	149	2,187	3,190	2,794	4,812
Colorado.....	162	40	339	124	672	854	885	1,075
Connecticut.....	189	35	152	28	441	610	644	885
Delaware.....	18	6	66	6	135	216	216	275
Dist. of Columbia.....	43	11	29	4	55	141	147	232
Florida.....	167	35	215	139	536	626	637	884
Georgia.....	212	30	260	57	643	733	763	1,213
Idaho.....	80	9	179	20	333	357	362	499
Illinois.....	972	145	2,267	331	3,049	3,941	4,147	5,347
Indiana.....	454	83	726	75	1,404	2,024	2,284	2,897
Iowa.....	534	77	1,028	147	1,766	2,145	2,208	2,778
Kansas.....	520	66	740	398	1,550	1,935	2,012	2,607
Kentucky.....	177	26	272	58	471	617	660	845
Louisiana.....	65	21	128	35	222	346	322	468
Maine.....	115	46	117	27	369	446	466	608
Maryland.....	136	36	193	40	428	615	654	842
Massachusetts.....	315	76	361	69	981	1,379	1,485	2,113
Michigan.....	444	74	822	154	1,640	2,045	2,270	2,904
Minnesota.....	516	56	921	104	1,542	1,801	1,923	2,404
Mississippi.....	67	13	167	27	237	312	320	434
Missouri.....	432	87	596	144	1,327	1,784	1,787	2,406
Montana.....	82	22	252	40	423	500	529	655
Nebraska.....	290	50	716	86	1,284	1,553	1,551	1,940
Nevada.....	19	5	42	4	71	105	85	130
New Hampshire.....	62	4	101	13	239	266	267	343
New Jersey.....	403	104	432	57	1,208	1,601	1,617	2,208
New Mexico.....	42	6	74	7	165	239	185	290
New York.....	925	211	1,115	234	3,954	4,658	4,793	6,781
North Carolina.....	196	28	306	58	481	675	633	877
North Dakota.....	159	17	306	62	468	525	593	755
Ohio.....	1,017	168	1,221	335	2,708	3,769	4,180	5,049
Oklahoma.....	320	46	439	69	702	1,148	1,116	1,589
Oregon.....	116	30	249	36	483	629	561	857
Pennsylvania.....	1,029	233	1,476	232	3,557	4,642	4,927	6,167
Rhode Island.....	53	14	30	6	121	180	185	294
South Carolina.....	138	20	178	21	228	395	392	532
South Dakota.....	153	21	383	51	535	641	665	858
Tennessee.....	122	35	221	67	351	492	476	667
Texas.....	595	88	771	128	1,708	2,934	2,564	3,895
Utah.....	45	11	101	13	161	292	232	367
Vermont.....	37	3	99	21	198	225	243	285
Virginia.....	114	45	274	64	382	620	634	847
Washington.....	184	52	413	54	748	982	923	1,368
West Virginia.....	124	27	207	44	367	446	489	583
Wisconsin.....	524	77	1,090	246	1,954	2,288	2,490	2,999
Wyoming.....	41	10	87	13	147	166	173	213
Total.....	13,452	2,522	21,449	4,248	43,582	57,397	58,692	78,739

1921 Motor Vehicle Exports

Total value U. S. automotive exports.....\$103,679,006

(Including motor vehicles, parts, engines and tires)

Rank among exports of finished goods..... 1st

U. S. Motor vehicles exported..... 38,094

Motor cars..... 30,594

Motor trucks..... 7,504

Motor vehicles shipped to U. S. territories..... 3,305

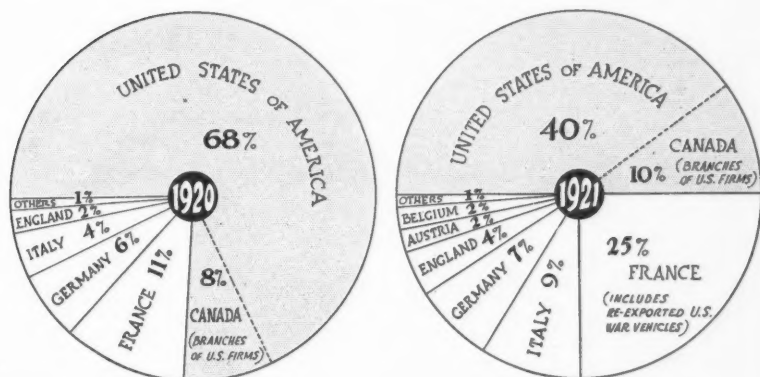
Canadian motor vehicles exported..... 10,756

(Output of branches of U. S. companies)

Leading motor vehicle foreign market..... Canada

Imports of motor vehicles..... 522

U. S. Leads World in Automotive Exports



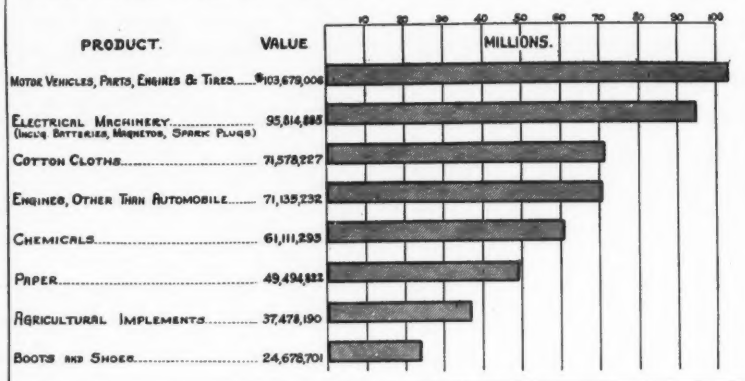
Motor Vehicle Exports for 1921

(Figures from U. S. Bureau of Foreign and Domestic Commerce)

Country	Passenger Cars No.	Passenger Cars Value	Motor Trucks No.	Motor Trucks Value	Parts Value
EUROPE					
Austria.....	21	\$11,647	1	\$520	\$2,931
Azores and Madeira Islands.....	4	28,335	3	1,369	4,173
Belgium.....	533	379,193	169	77,756	145,056
Bulgaria.....	12	5,995	.....	.....	901
Czechoslovakia.....	2	1,040	.....	.....	182
Denmark.....	109	159,586	18	33,375	1,842,018
Estonia.....	1	2,106	.....	.....	.....
Finland.....	33	44,250	6	6,000	22,154
France.....	153	359,071	10	14,991	1,099,683
Germany.....	22	45,538	1	535	20,917
Gibraltar.....	8	10,653	.....	.....	7,559
Greece.....	122	130,048	26	28,846	80,340
Latvia.....	.....	.....	.....	.....	330
Iceland and Faroe Islands.....	7	8,450	.....	.....	15,085
Italy.....	29	43,321	2	899	143,161
Lithuania.....	1	1,250	.....	.....	.....
Malta, Gozo and Cyprus Islands.....	59	40,603	4	1,666	9,718
Netherlands.....	398	427,776	300	207,932	203,377
Norway.....	55	67,500	20	28,461	200,547
Poland and Danzig.....	108	97,078	28	61,368	50,524
Portugal.....	18	40,331	.....	3,650	36,189
Roumania.....	124	132,265	15	25,102	42,744
Russia in Europe.....	14	19,564	32	25,100	2,690
Spain.....	421	737,030	27	49,592	799,893
Sweden.....	920	1,039,275	64	133,690	218,718
Switzerland.....	275	409,619	7	14,677	53,074
Turkey in Europe.....	57	54,106	5	16,715	39,741
Ukraine.....	.....	.....	1	600	.....
England.....	853	793,614	272	423,020	7,417,488
Scotland.....	7	5,025	5	7,290	14,705
Ireland.....	28	21,349	.....	.....	53,423
Jugoslavia, Albania, etc.....	35	29,119	2	1,430	10,184
Total.....	4,429	\$5,144,767	1,019	\$1,164,584	\$12,537,605
NORTH AMERICA					
Bermuda.....	.....	.....	2	709	3,723
British Honduras.....	14	9,988	.....	.....	.....
Canada.....	5,243	7,187,855	1,146	1,798,855	12,241,809
Costa Rica.....	20	28,254	13	24,920	12,303
Guatemala.....	71	102,141	7	5,920	39,161
Honduras.....	35	39,663	6	15,555	34,560
Nicaragua.....	9	11,044	5	14,200	10,203
Panama.....	267	277,193	71	98,790	123,292
Salvador.....	16	24,007	1	3,166	18,394
Mexico.....	6,750	5,183,791	1,482	1,554,554	1,528,729
Miquelon and Langely, etc.....	.....	.....	.....	.....	12
Newfoundland and Labrador.....	9	16,577	3	6,275	19,018
Total.....	12,434	\$12,880,623	2,738	\$3,527,515	\$14,031,204
WEST INDIES					
Barbados.....	57	43,799	3	1,800	31,343
Jamaica.....	221	165,013	43	51,469	151,667
Trinidad and Tobago.....	124	97,929	70	66,201	116,594
Other British West Indies.....	85	62,199	22	17,626	32,036
Cuba.....	1,692	1,428,162	283	368,710	1,527,363
Virgin Islands of U. S.....	45	27,359	7	5,701	27,867
Dominican Republic.....	102	85,848	18	52,473	124,592
Dutch West Indies.....	39	21,059	6	33,720	16,188
French West Indies.....	22	20,647	13	7,947	37,812
Haiti.....	36	26,173	14	6,281	39,492
Total.....	2,423	\$1,978,188	477	\$605,350	\$2,104,954

Country	Passenger Cars No.	Value	Motor Trucks No.	Value	Parts Value
SOUTH AMERICA					
Argentina.....	613	\$850,991	24	\$70,111	\$3,658,276
Bolivia.....	4	17,036	.....	.....	13,029
Brazil.....	285	418,834	103	354,810	522,825
Chile.....	99	142,288	45	64,636	168,605
Colombia.....	122	144,751	35	66,440	121,611
Ecuador.....	28	39,461	20	41,982	36,582
Falkland Islands.....	.....	.....	1	545	.....
Guiana—British.....	10	8,498	5	7,686	34,015
Dutch.....	11	8,260	.....	.....	9,575
French.....	1	1,000	.....	.....	248
Paraguay.....	1	1,200	.....	.....	9,369
Peru.....	76	185,362	52	89,401	227,387
Uruguay.....	164	297,382	81	34,713	202,044
Venezuela.....	275	273,425	13	18,911	154,536
Total.....	1,689	\$2,388,488	379	\$749,235	\$5,158,102
ASIA					
Aden.....	12	10,518	.....	.....	8,025
China.....	499	532,903	71	105,485	154,017
Armenia, etc.....	12	4,519	.....	.....	.....
Kwantung.....	6	19,807	13	26,435	5,705
Chosen.....	4	1,871	.....	.....	17,157
Total.....	533	\$569,518	84	\$131,920	\$184,904
EAST INDIES					
British India.....	820	909,609	132	269,760	549,954
Straits Settlement.....	105	149,013	63	158,487	160,762
Other British.....	41	96,251	4	4,192	24,740
Dutch.....	675	1,061,059	368	922,997	696,269
French.....	32	40,258	8	7,522	35,329
Far Eastern Republic.....	.....	.....	.....	.....	300
Greece in Asia.....	9	6,502	2	734	1,154
Hongkong.....	76	125,143	29	80,450	21,106
Japan.....	1,281	983,542	781	634,867	551,981
Hejaz, Arabia, etc.....	69	34,964	14	10,663	13,909
Persia.....	37	18,923	.....	.....	19,143
Palestine and Syria.....	.....	.....	11	11,194	47,941
Russia in Asia.....	.....	.....	.....	.....	4,233
Siam.....	63	73,498	.....	.....	19,662
Turkey in Asia.....	377	277,746	41	62,627	85,153
Total.....	3,585	\$3,776,508	1,453	\$2,163,493	\$2,231,636
OCEANIA—BRITISH					
Australia.....	3,020	3,065,809	720	1,194,900	1,033,010
New Zealand.....	691	875,552	161	341,449	452,840
Other British.....	11	11,018	1	2,168	7,796
French.....	10	10,643	.....	.....	10,423
Other.....	14	10,245	1	500	12,092
Philippine Islands.....	467	476,484	234	221,650	365,989
Total.....	4,213	\$4,449,751	1,117	\$1,760,667	\$1,882,150
AFRICA					
Belgian Congo.....	15	9,198	35	\$20,435	\$13,651
British—West.....	73	77,890	33	49,109	148,219
South.....	596	687,738	58	104,544	425,935
East.....	112	133,866	2	6,000	37,266
Canary Islands.....	67	55,077	18	16,539	38,487
French Africa.....	94	69,718	11	5,632	63,141
Kamerun, etc.....	6	4,690	5	1,944	6,998
Madagascar.....	80	61,485	.....	.....	1,135
Morocco.....	31	23,562	20	9,075	52,574
Portuguese Africa.....	31	23,562	11	7,984	10,423
Spanish Africa.....	2	6,950	.....	.....	335
Egypt.....	212	135,365	44	40,367	129,367
Total.....	1,288	\$1,265,539	237	\$261,629	\$927,531
Grand Total.....	30,594	\$32,453,282	7,504	\$10,364,393	\$39,057,986

AUTOMOTIVE PRODUCTS LEAD IN EXPORTS OF FINISHED GOODS.



Value of Automobile Parts Exported Annually (Not Including Engines and Tires)

(Figures from U. S. Bureau of Foreign and Domestic Commerce)

	1915*	1916*	1917*	1918*	1919†	1920†	1921†
Europe.....	\$4,051,730	\$12,381,657	\$12,117,721	\$10,974,888	\$10,472,943	\$35,776,877	\$12,537,835
North America..	2,989,180	8,144,091	10,489,084	13,933,706	19,893,741	27,411,318	14,031,204
South America..	166,226	469,309	2,160,830	4,556,551	5,967,907	12,494,584	5,158,108
Asia.....	227,905	538,140	974,831	1,007,440	2,399,261	4,356,225	184,904
Oceania.....	293,888	637,761	1,165,703	1,558,764	2,618,173	3,791,849	1,882,150
Africa.....	124,254	365,527	512,744	901,657	1,209,651	2,367,160	927,953
Total....	\$7,853,183	\$22,536,485	\$27,420,913	\$32,933,006	\$42,561,676	\$86,198,013	\$34,722,154

*Fiscal years. †Calendar years.

Value of Automobile Tires Exported Annually

(Figures from U. S. Bureau of Foreign and Domestic Commerce)

	1915*	1916*	1917*	1918*	1919†	1920†	1921†
Europe.....	\$2,745,450	\$10,992,184	\$3,480,114	\$1,460,518	\$11,907,480	\$4,124,210	\$5,895,215
North America..	1,187,632	2,184,874	3,186,265	4,474,713	5,188,317	9,346,968	4,632,588
South America..	214,068	1,050,398	2,596,936	3,432,181	4,986,024	7,391,010	1,785,363
Asia.....	73,430	477,895	810,300	1,194,551	2,970,464	5,081,831	1,524,811
Oceania.....	702,877	2,896,401	1,832,244	2,662,422	3,177,431	6,218,151	1,569,934
Africa.....	39,813	334,475	424,342	753,286	694,943	2,920,157	550,604
Total....	\$4,963,280	\$17,936,227	\$12,330,201	\$13,977,671	\$28,924,659	\$35,082,327	\$15,958,515

*Fiscal years. †Calendar years.

Export of Automobiles 1911-1921

(Figures from U. S. Bureau of Foreign and Domestic Commerce)

Year Ended December 31	Passenger Cars		Motor Trucks		Passenger Cars and Motor Trucks	
	Number	Value	Number	Value	Number	Value
	not given	separately	not given	separately		
1911.....					15,807	\$15,924,361
1912.....					23,720	23,703,989
1913.....	25,880	\$25,343,644	1,009	\$ 1,686,807	26,889	27,030,451
1914.....	22,335	19,521,708	3,430	8,985,756	25,765	28,507,464
1915.....	41,864	35,045,090	22,094	59,839,303	63,958	94,884,393
1916.....	61,922	43,725,087	18,921	52,948,021	80,843	96,673,108
1917.....	65,756	51,872,905	14,479	36,755,236	80,235	88,628,141
1918.....	36,936	36,278,232	10,308	26,814,952	47,244	63,093,244
1919.....	67,145	73,700,527	15,585	35,425,437	82,730	109,125,964
1920.....	142,508	165,255,921	29,136	46,775,781	171,644	212,031,702
1921.....	30,594	32,453,282	7,504	10,364,393	38,094	42,817,675

Value of Automobile Engines Exported Annually

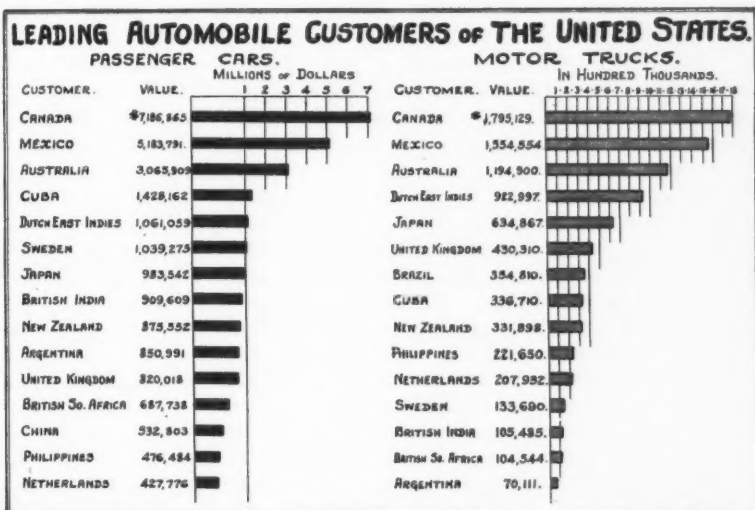
(Figures from U. S. Bureau of Foreign and Domestic Commerce)

	1914*	1915*	1916*	1917*	1918*	1919†	1920†	1921†
Europe.....	\$1,310,951	\$1,323,144	\$1,519,200	\$992,321	\$641,992	\$102,578	\$339,008	\$120,349
North America	71,837	72,232	1,102,618	1,809,343	2,751,671	4,553,778	4,555,063	1,605,411
South America	1,140	2,084	4,781	1,062	722,172	8,752	12,505	72,762
Asia.....	2,431	345	267	1,664	2,075	50,645	98,021	10,205
Oceania.....	4,983	3,955	3,536	7,521	7,639	20,691	22,846	10,980
Africa.....	551	574	1,021	6,010	1,708	1,897	4,413	1,413

Total.... \$1,391,893 \$1,393,334 \$2,631,414 \$2,817,921 \$4,127,257 \$4,635,763 \$5,031,866 \$1,821,120

*Fiscal Year.

†Calendar Year.



This chart indicates that the important automobile markets of the world are widely scattered over the globe. European markets, though important, are shown here to be but a fraction of the export trade.

Imports of Automobiles 1911-1921

Year Ended December 31	Passenger Cars and Motor Trucks		Year Ended December 31	Passenger Cars and Motor Trucks	
	No.	Value		No.	Value
1911.....	972	\$2,098,481	1917.....	78	\$112,440
1912.....	868	1,999,587	1918.....	73	39,733
1913.....	492	1,154,873	1919.....	117	123,025
1914.....	296	493,305	1920.....	926	1,026,518
1915.....	221	327,296	1921.....	522	876,163
1916.....	1429	770,319			

Shipment of Automobiles to Non-Contiguous Territories

(Figures from U. S. Bureau of Foreign and Domestic Commerce)

1916			1917			1918		
	No.	Value		No.	Value		No.	Value
Alaska.....	114	\$102,426		152	\$141,128		96	\$86,771
Hawaii.....	1903	1,900,926		1891	1,802,413		1554	1,507,498
Porto Rico.....	1152	789,057		1289	1,181,353		1106	1,146,533
	3169	\$2,792,409		3332	\$3,124,894		2756	\$2,740,802

1919			1920—Passenger			1920—Trucks		
	No.	Value		No.	Value		No.	Value
Alaska.....	90	\$81,135		85	\$97,053		54	\$51,339
Hawaii.....	1611	1,873,318		2860	3,011,547		495	687,390
Porto Rico.....	776	1,209,489		1544	2,075,173		427	1,064,207
	2477	\$3,163,942		4489	\$5,183,773		976	\$1,802,936

1921—Passenger			1921—Trucks			1921—Total		
	No.	Value		No.	Value		No.	Value
Alaska.....	70	\$75,242		15	\$10,279		85	\$85,521
Hawaii.....	1955	1,873,562		220	346,082		2175	2,219,644
Porto Rico.....	547	615,367		134	195,578		681	810,945
	2572	\$2,564,171		369	\$551,939		2941	\$3,116,110

Motor Transport Organization in Great Britain

The business community of Great Britain is beginning to realize that a thoroughly efficient motor transport organization is a national asset. Such an organization permits the haulage of goods direct from the seller to the buyer. But it does more. It eliminates "dead mileage" or reduces it to a minimum. For this purpose a number of clearing houses have been established, with branches in the principal towns. Thus, further work, or return loads, can be found for trucks arriving in the district.

Clearing houses sprang into being in order to balance traffic. It was easy to get work out of London, but hard to get a return load. Some contractors tried running between distant terminals, but

this often resulted in empty returns. Moreover, few haulers cared to risk capital in establishing a number of scattered branches.

The English shipper also benefits by these clearing houses. He can engage a hauler without delay, while the latter, anxious to get his truck back to its base, quotes low rates for a return load.

English shippers are also demanding that their goods be sent in covered-in vehicles, and locked box trucks are becoming a feature of many English fleets. In such trucks goods can be transmitted practically unpacked without fear of pilferage.—*Commercial Vehicle* (New York).

State Laws Regulating Motor Vehicle Operation

(Note.—Pamphlet giving details of regulations referred to on this page and of state fees on motor vehicle operation may be obtained on request from the Motor Vehicle Conference Committee, 366 Madison Avenue, New York, N. Y.)

The Motor Vehicle Conference Committee is composed of representatives from the American Automobile Association, Motor and Accessory Manufacturers' Association, National Automobile Chamber of Commerce, National Automobile Dealers' Association, Rubber Association of America, and the Trailer Manufacturers' Association of America.)

State Regulation of Motor Vehicle Common Carriers

Position of the Conference Committee

Pending the investigation of all the facts involved and a canvass of the experiences and opinions of motor vehicle common carriers in the states where they are subjected to the control of some state agency, the Motor Vehicle Conference Committee has withheld its judgment on the matter. In all probability it will formulate definite policies and recommendations in the premises before the close of the current year.

State Size and Weight Restrictions

Advocated by the Proposed Uniform Vehicle Law

Size Restrictions	Weight Restrictions	Number of Trailers	Special powers to Lower Restrictions	Special Permits to Raise Restrictions
Width over-all 96 in.; height 12 ft. 6 in.; length 30 ft. for single vehicle; 85 ft. for combination of vehicles.	28,000 lbs. gross weight distributed not more than 22,400 lbs. on one axle, nor more than 800 lbs. per inch of tire width measured between the flanges of the rim.	Any number within 85 ft. limit for combination.	The proposed Uniform Vehicle Law does not as yet include recommendations on this subject.	Officials may issue permits for operation of restricted vehicles over highways under their control.

The foregoing restrictions are liberal enough to permit a state to take advantage of the economies which come from the use of the larger commercial motor vehicles; on the other hand they are low enough and of such a character that vehicular travel on the highways is amply safeguarded and highway foundations and surfaces fully protected from destruction. This is particularly true in the case of weight restrictions where a gross weight of 28,000 lbs. distributed not more than 800 lbs. per inch of tire width is advocated.

A special committee composed of representatives from the American Association of State Highway Officials, National Automobile Chamber of Commerce, American Automobile Association, and Highway Industries Association drafted the Proposed Uniform Vehicle Law in which these provisions among others are recommended for uniform adoption by all of the states. The Committee's experience and ability in matters of this sort and the long and painstaking efforts which they gave to the size and weight restriction phases of the subject should make their advice of particular value to state law-makers who may consider laws along these lines.

(State Taxes and Fees on Motor Vehicle Operation are tabulated on the following pages.)

Annual State Taxes and Fees

(The following fees and taxes are

State	Registration Fees Passenger Cars	Registration Fees Commercial Cars and Trucks	Registration Fees Motor- cycles	Registration Fees Trailers
	<i>Horsepower</i>	<i>Tons Capacity</i>	<i>Flat Rate</i>	
Alabama.....	Under 25.....\$11.25 25-less than 30 18.75 30-less than 40 26.25 40 and over.. 30.00 <i>Flat Rate</i> Electric..... 20.00 <i>Flat Rate</i> Steam..... 25.00	Under 1.....\$15.00 1 less than 2..... 22.50 2 less than 3..... 37.50 3 less than 4..... 56.25 4 and over..... 75.00	\$5.00; with side car, \$7 50.	.....X.....
Arizona.....	<i>Horsepower</i> 25 or less....\$ 5.00 Over 25 through 40. 10.00 Over 40..... 15.00	<i>Tons Capacity</i> 1½ or less.....\$10.00 Over 1½ through 3 15.00 Over 3..... 25.00	<i>Flat Rate</i> \$2.00.	.....X.....
Arkansas.....	<i>Horsepower and Lbs. Gross Weight</i> Per H. P.....\$0.25 Per 100 lbs. gross weight. .25 (Minimum fee \$10.) Weight of pas- sengers seating capacity times-150 lbs. per person.	<i>Tons Capacity</i> <i>Pneu. Solid</i> 1 or less..\$15.00 \$15.00 1½..... 20.00 20.00 2..... 25.00 25.00 2½..... 35.00 35.00 3..... 50.00 50.00 3½..... 65.00 97.50 4..... 80.00 120.00 4½..... 100.00 150.00 5..... 125.00 187.50 6..... 150.00 225.00	<i>Flat Rate</i> \$5 00; with side car, \$7.50.	<i>Tons Capacity</i> <i>Pneu. Solid</i> 1 or less..\$10.00 No pro- 2..... 15.00 vision 3..... 25.00 made in 4..... 40.00 law. 5..... 50.00
California.....	<i>Horsepower</i> Per H. P.....\$0.40 <i>Flat Rate</i> Electric..... 5.00	<i>Horsepower Plus Lbs. Weight</i> Per H. P.....\$ 0.40 (Electrics \$5), plus fol- lowing based on unladen weight in lbs. Less than 4000....\$ 5.00 4000 under 6000... 10.00 6000 under 10000. 15.00 10000 and over... 20.00	<i>Flat Rate</i> \$2.00.	<i>Flat Rate</i> \$2.00 each.
Colorado.....	<i>Horsepower</i> 20 or less....\$ 2.50 21 through 40. 5.00 41 and over... 10.00	<i>Tons Capacity</i> 1.....\$10.00 Over 1-2..... 17.50 Over 2-3..... 25.00 Over 3-4..... 37.50 Over 4-5..... 50.00 Each additional ton over 5..... 25.00	<i>Flat Rate</i> \$2.00.	<i>Tons Capacity</i> 1 less than 2.....\$10.00 Each additional ton..... 5. (¼ ton cap. not subject to fee.)
Connecticut...	<i>Cubic Inch Displacement</i> Per cu. in. of displacement.\$0.08 (Minimum fee \$15) Electric per H. P..... .75 (Minimum fee \$5) Steam per H. P..... .75 (Minimum fee \$15)	<i>Tons Capacity</i> <i>Pneu. Solid</i> 1 or less..\$22.50 \$30.00 Ov. 1-1¼. 30.00 40.00 Ov. 1¼-2. 37.50 50.00 Ov. 2-2¼. 60.00 60.00 Ov. 2¼-3. 70.00 70.00 Ov. 3-3¼. 90.00 90.00 Ov. 3¼-4. 137.50 137.50 Ov. 4-4¼. 162.50 162.50 Ov. 4¼-5. 187.50 187.50 Ov. 5-5¼. 280.75 280.75 Ov. 5¼-6. 250.00 250.00	<i>Cu. In. Displace- ment</i> Same basis as for pas- senger cars. Min- imum fee, \$5; with side car, \$5, addi- tional.	.....X.....

\$100 extra per ton above 6
(Minimum fee \$22.50)

(Continued on

on Motor Vehicle Operation

effective for the year 1922)

Registration Fees Dealers	License Fees Operators	Special or Extra Fees on Motor Vehicles Used for Hire	Gasoline Tax (per Gallon)	Personal Property Tax	State
\$1.00 each for dealers tags. In addition special license tax ranging from \$25.00 to \$125.00 according to size of county in which business is located.	Owner, none; chauffeur, \$5.00; renewal, \$2.50.	In lieu of regular registration fees, the following: Seating capacity, 5-passenger or less, \$37.50; seating capacity over 5 passengers, less than 10, \$60.00; seating capacity, over 10 passengers, \$90.00.	...X...	..Yes...	.....Alabama
One vehicle of each class at regular fee. Extra plates 50c per set.	Owner, none; chauffeur, \$5.00, perpetual.	.....X.....	...1c...	..Yes...	.....Arizona
\$25.00 for one registration in each class of vehicle; additional sets of plates \$2.50 per set.	Owner, none; chauffeur, \$1.00.	.....X.....	...1c...	..Yes...	.....Arkansas
\$10.00 for first set of plates; extra sets, \$5.00 per set. Motorcycles, \$5.00 for first plate; extra plates \$1.00 apiece.	Owner, none; chauffeur, \$2.00; renewal, \$1.00.	.....X.....	...X...	..Yes...	.....Cal for in
Passenger cars and trailers, \$20.00 for first registration; \$2.50 each for next four; \$10.00 each beyond five. Trucks, \$30.00 for first registration; \$10.00 each next four; \$20.00 each above five. Motorcycles one-third of passenger car dealers rate.	Owner, none; chauffeur, \$2.00.	Special registration fees for passenger carrying motor vehicles; seating 9 passengers or less, \$20.00; for each additional seat of capacity, \$1.00.	...1c...	..Yes...	.....Colorado
\$10.00 per set of plates up to 12 sets on one number. Minimum fee \$50.00. Motorcycles, \$4.00 per set up to 10 sets on one number. Manufacturers \$10.00 per set of plates up to 10 sets. Minimum fee \$50.00. For testing engines on highways, \$2.00 per engine.	Owner, \$3.00; chauffeur, \$3.00; public service operator, \$5.00; examinations, \$2.00.	Extra registration fees as follows: Regular fees plus \$15.00 for vehicle with seating capacity of 5 or less; over 5 but under 21, \$2.00 per seat over 5; 21 but under 41, \$5.00 per seat over 20; 41 or over \$10.00 per seat over 40.	...1c...	..Yes...	..Connecticut

two following pages)

Annual State Taxes and Fees

(Continued from

State	Registration Fees Passenger Cars	Registration Fees Commercial Cars and Trucks	Registra- tion Fees Motor- cycles	Registration Fees Trailers
Delaware.....	<i>Lbs. Gross Weight</i> Per 500 lbs. ....\$2.00 (Weight of pas- sengers, seating capacity times 125 lbs.)	<i>Lbs. Gross Weight</i> Per 500 lbs. ....\$2.00	<i>Flat Rate</i> \$5.00.	<i>Lbs. Gross Weight</i> Per 500 lbs. ....\$2.00 Metal tired trailers ex- ceeding 1500 lbs. double rate.
District of Columbia...	<i>Horsepower</i> 24 or less.....\$ 3.00 25 to 30..... 5.00 Over 30..... 10.00	<i>Horsepower</i> Same basis as for pas- senger cars	<i>Flat Rate</i> \$2.00.	.....X.....
Florida.....	<i>Lbs. Gross Weight</i> Per 100 lbs....\$0.50	<i>Lbs. Gross Weight</i> Per 100 lbs. (pneu.) \$0.75 Per 100 lbs. (solid) 1.12	<i>Flat Rate</i> \$5.00; with side cars \$8.00.	<i>Lbs. Gross Weight</i> Per 100 lbs. (pneu.) \$0.75 Per 100 lbs. (solid) 1.12
Georgia.....	<i>Horsepower</i> 23 or less.....\$11.25 Over 23..... 0.60	<i>Tons Capacity</i> 1 or less..... \$15.00 Over 1-1½..... 22.50 Over 1½-2..... 30.00 Over 2-2½..... 37.50 Over 2½-3..... 45.00 Over 3-3½..... 52.50 Over 3½-4..... 75.00 Over 4-5..... 150.00 Over 5-6..... 375.00 Over 6-7..... 750.00 Over 7..... 1,125.00	<i>Flat Rate</i> \$5.00.	.....X.....
Idaho.....	<i>Lbs. Gross Weight</i> 2000 or less...\$15.00 Over 2000 to 3000..... 20.00 Over 3000 to 4000..... 30.00 Over 4000.... 40.00 When owned or used for 5 years ⅔ of above.	<i>Lbs. Gross Weight</i> Same basis as passenger cars.	<i>Flat Rate</i> \$5.00.	<i>Lbs. Gross Weight</i> Same basis as passenge cars.
Illinois.....	<i>Horsepower</i> 25 or less.....\$ 8.00 Over 25-35.... 12.00 Over 35-50.... 20.00 Over 50..... 25.00 <i>Flat Rate</i> Electric..... 12.00	<i>Lbs. Gross Weight</i> 5000 or less.....\$12.00 Over 5000-12000. 22.50 Over 12000-15000. 35.00 Over 15000..... 60.00	<i>Flat Rate</i> \$4.00.	.....X.....

(Continued on

on Motor Vehicle Operation

two preceding pages)

Registration Fees Dealers	License Fees Operators	Special or Extra Fees on Motor Vehicles Used for Hire	Gasoline Tax (per Gallon)	Personal Property Tax	State
\$20.00 per registration and 2 sets of plates. Extra sets \$10.00 per set.	Owner, \$3.00; chauffeur, \$3.00; fam- ily, \$8.00.	.....X.....	...X...	..No...	.....Delaware
Regular rates for each car demonstrated on public highways.	Owner, \$2.00 perpetual; chauffeur, \$2.00 per- petual.	.....X.....	...X...	..Yes...	.....District of Columbia
.....X.....	Owner, none; chauffeur, \$2.00.	Special registration fees for passenger carrying vehicles: Seating cap- acity: 7 or less, \$5.00 per seat; over 7 through 16, \$7.50 per seat; 17 or over, \$10.00. In addition 75c per 100 lbs. gross weight of vehicle and load. For property carrying ve- hicles, \$1.50 per 100 lbs. gross weight on pneumatic tires, \$2.25 per 100 lbs. on solids.	...1c...	..Yes...	.....Florida
\$50.00 for 5 sets of plates.	Owner, none; chauffeur, \$2.00.	Special registration fees for passenger carrying vehicles with a seating capacity of 10 or more, \$75.	...1c...	..Yes...	.....Georgia
\$35.00 for one make; \$25.00 for each addi- tional make. Motor- cycles, \$15.00. Display plates \$1.00 apiece.	Owner, none; chauffeur, \$2.00.	.....X.....	...X...	..No...	.....Idaho
\$20.00 for first registra- tion and 2 sets of plates; additional sets \$10.00 per set.	Owner, none; chauffeur, \$5.00; re- newal, \$3.00.	Extra state tax on property carrying ve- hicles not operated exclusively within a municipality. Gross weight, 12,000 lbs. or less, 1c per mile; over 12,000 lbs., 2c per mile. On passenger carrying vehicles gross weight 12,000 lbs. or less 1/10c; over 12,000 lbs. but not more than 15,000 lbs., 3/4c; over 15,000 lbs., 1c per mile.	...X...	..Yes...	.....Illinois

two following pages)

Annual State Taxes and Fees

(Continued from

State	Registration Fees Passenger Cars	Registration Fees Commercial Cars and Trucks	Registration Fees Motor- cycles	Registration Fees Trailers
Indiana.....	<i>Horsepower</i> Less than 25.....\$ 5.00	<i>Tons Capacity</i> Less than 1.....\$ 6.00	<i>Flat Rate</i> \$2.00.	<i>Tons Capacity</i> Less than 1.....\$ 3.00
	25 less than 40 8.00	1 under 2..... 15.00		1 under 2..... 6.00
	40 less than 50 20.00	2 under 3½..... 25.00		2 under 5..... 10.00
	50 or over.... 30.00	3½ under 5..... 50.00		5 under 7½..... 20.00
	<i>Flat Rate</i> Electric..... 5.00	5 under 7½..... 75.00		
Iowa.....	<i>Value Plus Lbs. Weight</i> 1% of value	<i>Tons Capacity</i> <i>Pneu. Solid</i> 1 or less.....\$15.00 \$15.00	<i>Flat Rate</i> \$5.00.	<i>Tons Capacity</i> <i>Pneu. Solid</i> ½ under 1 \$10.00
	Per 100 lbs. ....\$0.40	1½..... 22.50 22.50	After five	1 under 2 15.00 \$ 5.00
	(Minimum fee \$10)	2..... 30.00 30.00	registra-	2 under 3 15.00
		2½..... 45.00 55.00	tions ,	3 under 4 25.00 35.00
		3..... 65.00 75.00	\$2.50.	4 under 5 40.00 50.00
		3½..... 90.00 100.00		5 under 6 50.00 60.00
		4..... 105.00 115.00		6 under 7 60.00 70.00
		4½..... 120.00 130.00		1 under 2.....\$15.00
		5..... 135.00 145.00		2 under 3..... 30.00
		6..... 165.00 175.00		Weighing less than ½-ton with loading capacity of less than ¼-ton not subject to fee.
		Per ton		
		over 6..... 50.00 50.00		
		(Note—Trucks over 2- ton capacity in city limits pay two-thirds above fees).		
		For steel tires:		
		1-ton capacity... \$40.00		
		1½-ton capacity.. 50.00		
Kansas.....	<i>Flat Rate Plus Lbs. Weight</i> Flat rate.....\$ 8.00	<i>Tons Capacity</i> 1 or less.....\$ 15.00	<i>Flat Rate</i> \$5.00.	.....X.....
	Per 100 lbs. of	Over 1-1½..... 22.50		
	weight in ex-	Over 1½-2..... 30.00		
	cess of 2000	Over 2-2½..... 37.50		
	lbs..... .50	Over 2½-3..... 45.00		
	<i>Flat Rate</i>	Over 3-4..... 70.00		
	Electrics..... 10.00	Over 4-5..... 100.00		
		Over 5 \$100 plus		
		per ton or fraction		
		thereof over 5.		
Kentucky.....	<i>Horsepower</i> Per H. P.....\$0.60	<i>Lbs. Capacity</i> 1000 or less.....\$ 22.00	<i>Flat Rate</i> \$10.00.	.....X.....
		Over 1000-2000.. 30.00		
		Over 2000-3000.. 40.00		
		Over 3000-4000.. 50.00		
		Over 4000-5000.. 60.00		
		Over 5000-6000.. 70.00		
		Over 6000-7000.. 90.00		
		Over 7000-8000.. 110.00		
		Over 8000-9000.. 130.00		
		Over 9000-10000. 150.00		
		Over 10000..... 150.00		
		\$50.00 for each additional ton.		
Louisiana....	<i>Horsepower Plus Lbs. Capacity</i> Per H. P.....\$0.68	<i>Horsepower Plus Lbs. Capacity</i> Per H. P.....\$0.68	<i>Flat Rate</i> \$5.00.	.....X.....
	(Minimum fee \$15)	<i>Lbs. Capacity</i> 4000 or less.....\$10.00		
		4001 or less 5000.. 12.50		
		5001 or less 6000.. 15.00		
		6001 or less 8000.. 20.00		
		8001 or less 10000 25.00		
		\$150 per 1000 lbs. in excess of 10000.		
		(Minimum fee \$25)		

(Continued on

on Motor Vehicle Operation

(two preceding pages)

Registration Fees Dealers	License Fees Operators	Special or Extra Fees on Motor Vehicles Used for Hire	Gasoline Tax (per Gallon)	Personal Property Tax	State
\$25.00 for first registration; extra sets of plates \$1.00 per set.	Owner, none; chauffeur, \$2.00.	.....X.....	...X...	..Yes...	.....Indiana
\$25.00 for 2 sets of plates; extra plates \$3.00 per set.	Owner, none; chauffeur, \$2.00.	.....X.....	...X...	..No...	.....Iowa
\$25.00 for 3 sets of plates; extra sets 50c per set. Motorcycles, \$5.00 for 2 sets of plates. Extra sets 50c per set.	Owner, none; chauffeur, none.	.....X.....	...X...	..Yes...	.....Kansas
\$25.00 for first registration; extra plates \$1.00 per set.	Owner, none; chauffeur, \$2.00; renewal, \$1.00.	.....X.....	...1c...	..Yes...	.....Kentucky
Regular fees for each type of vehicle, which entitles manufacturer or dealer to five sets of plates at \$2.00 per set.	Owner, none chauffeur, \$5.00.	Special registration fee for passenger carriers: 68c per H. P., plus \$2.00 per passenger up to 8; \$3.00 per passenger, 8 to 25; \$5.00 per passenger over 25.	...1c...	..Yes...	.....Louisiana

(two following pages)

Annual State Taxes and Fees

(Continued from

State	Registration Fees Passenger Cars	Registration Fees Commercial Cars and Trucks	Registration Fees Motor- cycles	Registration Fees Trailers
	<i>Horsepower Plus Lbs. Weight</i>	<i>Lbs. Capacity</i>	<i>Flat Rate</i>	<i>Lbs. Gross Weight</i>
Maine.....	Per H. P. \$0.25 Pneu. Per 100 lbs. .... .25 Solid Per 100 lbs. .... .50 (Minimum fee \$10)	1000 or less. \$10.00 Over 1000-2000. . 15.00 Over 2000-4000. . 20.00 Over 4000-6000. . 55.00 Over 6000-8000. . 80.00 Over 8000. 110.00 If equipped with 2 or more solid tires 33½ % more.	\$5.00; with side cars \$10.00.	Per 100 lbs. (pneu.) \$0.15 Per 100 lbs. (solid) .40 Per 100 lbs. (metal) .75
	<i>Horsepower</i>	<i>Tons Capacity</i>	<i>Flat Rate</i>	<i>Tons Capacity</i>
Maryland....	Per H. P. \$0.60 (Minimum fee \$10)	1 or less. \$20.00 2 or less. 40.00 3 or less. 60.00 4 or less. 100.00 5 or less. 150.00 6 or less. 300.00 7 or less. 500.00 Equipped with pneu- matic tires same basis as for passenger cars. Solid tired electrics ½ above.	\$5.00; with side car \$8.00.	Per first ton with rubber tires. \$10.00 Each additional ton. 20.00 Metal tires double the above.
	<i>Horsepower</i>	<i>Tons Capacity</i>	<i>Flat Rate</i>	<i>Tons Capacity</i>
Massachusetts.	Less than 30 \$10.00 30 less than 40 15.00 40 less than 50 20.00 50 or over... 25.00	\$10.00 per ton. Electrics one half.	\$5.00.	Pneumatic tires half rates for solid tired trucks. Solid rubber same as rates for solid tired trucks. Metal double rates of solid tired trucks.
	<i>Horsepower Plus Lbs. Weight</i>	<i>Horsepower Plus Lbs. Weight</i>	<i>H. P. Plus Lbs. Weight</i>	<i>Weight</i>
Michigan....	Per H. P. \$0.25 Per 100 lbs. \$0.35	Same as for passenger cars.	2 5 c per H. P. plus 3 5 c per 100 lbs. of weight.	Per 100 lbs. \$0.50
	<i>Value Plus Lbs. Weight</i>	<i>Value Plus Tons Capacity</i>	<i>Flat Rate</i>	<i>Tons Capacity</i>
Minnesota....	2% of value (Minimum fee \$12 for vehicles weigh- ing less than 2000 lbs. Over 2000 \$15)	2% of value (Minimum fee \$15) Less than 2. \$15.00 2-4. 30.00 Over 4. 50.00	\$5.00; with side cars, \$8.00.	\$2.00 per ton or fraction thereof.
	<i>Horsepower</i>	<i>Tons Capacity</i>	<i>Flat Rate</i>	
Mississippi....	Per H. P. \$ 0.50 (Minimum fee \$5) Flat Rate Electrics. 15.00	1 or less. \$10.00 1½. 15.00 2. 30.00 2½. 35.00 3. 55.00 3½. 75.00 4. 115.00 4½. 155.00 5. 200.00 6. 250.00 Over 6. 300.00	\$10.00.	..... X.

(Continued on

ees on Motor Vehicle Operations

from two preceding pages)

Registration Fees Dealers	License Fees Operators	Special or Extra Fees on Motor Vehicles Used for Hire	Gasoline Tax (per Gallon)	Personal Property Tax	State
\$30.00 for 3 pairs of plates; 2 extra pairs, \$10.00; extra plates, \$5.00 per pair. Motorcycles, \$15.00 on 3 sets of plates. Extra sets \$5.00 per set.	Owner, \$2.00; chauffeur, \$5.00; renewal, \$3.00.	Extra State Registration fee amounting to 100% over normal fee.	...X...	..Yes...	.....Maine
\$25.00 for first 2 sets of tags; \$15.00 for each additional set. Motorcycles, \$20.00 for first four tags.	Owner, \$2.00 perpetual; for motorcycle, \$1.00 perpetual; chauffeur, \$3.00.	Special fee, \$1.20 per H. P.	...24...	..Yes...	.....Maryland
\$25.00 for first 5 sets of plates; extra sets \$5.00 per set. Motorcycles, \$10.00 for first 5 plates.	Owner, \$2.00; chauffeur, \$2.00; examination of both, \$2.00; renewal of both, \$2.00.	.....X.....	...X...	..No...	.....Massachusetts
\$30.00 for 3 sets of plates; extra sets \$10.00 per set. Motorcycles, \$10.00 for five plates.	Owner, 50c; perpetual; chauffeur, \$2.00.	.....X.....	...X...	..No...	.....Michigan
\$12.00 per set of plates.	Owner, none; chauffeur, \$1.50; renewal, \$1.00.	25% extra registration fee for property carrying motor vehicles and passenger carrying motor vehicles, seating more than 7 passengers.	...X...	..No...	.....Minnesota
Regular registration fee for which 4 sets of plates are given for \$1.00 per set.	Owner, none; chauffeur, none.	.....X.....	...X...	..Yes...	.....Mississippi

d on two following pages)

Annual State Taxes and Fees

(Continued from

State	Registration Fees Passenger Cars	Registration Fees Commercial Cars and Trucks	Registration Fees Motorcycles	Registration Fees Trailers
	<i>Horsepower</i>	<i>Tons Gross Weight</i>	<i>Flat Rate</i>	<i>Tons Capacity</i>
Missouri.....	Less than 12.. \$ 5.00 12 under 24.. 7.00 24 under 36.. 11.00 36 under 48.. 15.00 48 under 60.. 17.00 60 under 72.. 21.00 72 and over.. 25.00 <i>Flat Rate</i> Electrics..... 6.00	Less than 2..... \$ 7.00 2 less than 5..... 12.00 5 less than 6..... 18.00 6 less than 7..... 20.00 7 less than 8..... 24.00 Over 8..... 10.00 Per ton extra.	Motorcycles, tricycles, \$5.00.	Half of commercial vehicles fee; semi-trailers quarter of commercial vehicles fee.
Montana.....	<i>Horsepower</i> 23 or less.... \$ 7.50 Over 23 to 37.. 15.00 Over 37..... 22.50 <i>Flat Rate</i> Electrics..... 15.00	<i>Tons Capacity</i> 1 or less..... \$10.00 Over 1-2..... 22.50 Over 2-3..... 37.50 Over 3..... 60.00	<i>Horsepower</i> Same basis as for passenger cars. Bicycles with motor attachment, \$1.50	..... X.....
Nebraska.....	<i>Lbs. Gross Weight</i> 2000 lbs..... \$10.00 Per 100 lbs. over 2000.. .50 Gross weight taken when seating capacity exceeds 7. (Passengers reckoned at 150 lbs. apiece.)	<i>Lbs. Gross Weight</i> 2000 lbs..... \$10.00 Per 100 lbs. over 2000..... .50	<i>Flat Rate</i> \$5.00.	..... X.....
Nevada.....	<i>Lbs. Gross Weight</i> Per 100 lbs... \$0.35 Factory weight plus seating capacity times 125 lbs. per person.	<i>Lbs. Gross Weight</i> Per 100 lbs..... \$0.35	<i>Flat Rate</i> \$5.00.	<i>Lbs. Gross Weight</i> Per 100 lbs..... \$0.35
New Hampshire.....	<i>Lbs. Gross Weight</i> Per 100 lbs... \$0.60 (Minimum fee \$15) Passengers figured at 150 lbs. each, times seating capacity.	<i>Lbs. Gross Weight</i> Per 100 lbs. (pneu.) \$0.60 (Minimum fee \$20) Per 100 lbs. (solid) \$0.85 (Minimum fee \$30) Per 100 lbs. Iron or steel..... \$1.00	<i>Flat Rate</i> \$5.00; with side car, \$8.00.	<i>Lbs. Gross Weight</i> Per 100 lbs. (pneu.) \$0.50 Per 100 lbs. (solid) .65 Per 100 lbs. (metal) .90
New Jersey...	<i>Horsepower</i> 29 or less.... \$0.40 Over 29..... .50	<i>Lbs. Gross Weight</i> 1000 or less..... \$10.00 1001-2000..... 12.00 2001-3000..... 15.00 3001-4000..... 20.00 4001-5000..... 24.00 Per 1000 over 5000..... 3.00 29001-30000..... 99.00	<i>Flat Rate</i> \$2.00.	<i>Lbs. Gross Weight</i> Same basis as for trucks.
New Mexico...	<i>Horsepower</i> Per H. P..... \$0.40 (Minimum fee \$6) Defined as motor vehicles with pneumatic tires.	<i>Horsepower</i> Per H. P..... \$0.50 Per H. P. (pneu.) .40 (Minimum fee \$6.00)	<i>Flat Rate</i> \$3.00.	..... X.....

(Continued from

on Motor Vehicle Operation

two preceding pages)

Registration Fees Dealers	License Fees Operators	Special or Extra Fees on Motor Vehicles Used for Hire	Gasoline Tax (per Gallon)	Personal Property Tax	State
\$10.00 for 2 sets of plates. Extra sets, \$5.00 per set.	Owner, none; chauffeur, \$3.00.	.....X.....	...X...	..Yes...	.....Missour
\$75.00 for 6 sets of plates. Motorcycles, \$22.50 for 6 sets.	Owner, none; chauffeur, \$2.00.	.....X.....	...lc...	..Yes...	.....Montana
Regular registration fee on first set of plates. Additional sets, \$10.00 per set.	Owner, none; chauffeur, none.	.....X.....	...X...	..Yes...	.....Nebraska
\$30.00 for four sets of plates. Extra sets \$1.00 per set.	Owner, none; chauffeur, none.	Extra annual tax of \$2.00 per 100 lbs. gross weight for oper- ating on first class highways, \$1.00 per 100 lbs. on second class; 25c per 100 lbs. on other than first and second class.	...X...	..Yes...	.....Nevada
\$85.00 for 6 sets of plates; extra sets, \$8.00 per set. Motorcycles, \$15.00 for three sets of plates; extra sets, \$2.00.	Owner, \$3.00; renewal, \$2.00; chauffeur, \$5.00; renewal, \$2.00; motor- cycle operator, \$1.00	.....X.....	...X...	..No...	N. Hampshire
\$25.00 per set; 5 pairs of plates to set. Motor- cycles, \$15.00 per set; 3 pairs of plates to set.	Owner, \$3.00; chauffeur, \$3.00.	Special registration fees as follows: 5 passen- ger or less, \$15.00; 6 to 8 passengers, \$17.50; 9 to 12 pas- sengers, \$20.00; 13 to 17 passengers, \$25.00; 18 to 22 passengers, \$30.00; 23 to 26 pas- sengers, \$35.00; 27 to 30 passengers, \$40.00; over 30 passengers, \$40.00; plus \$2.00 per seat in excess of 30.	...X...	..Yes...	.....New Jersey
\$25.00 for first registra- tion and general dis- tinguishing number. Extra plates \$5.00 per set.	Owner, none; chauffeur, none.	.....X.....	...lc...	..Yes...	.....New Mexico

two following pages)

Annual State Taxes and Fees

(Continued from

State	Registration Fees Passenger Cars	Registration Fees Commercial Cars and Trucks	Registration Fees Motor- cycles	Registration Fees Trailers
New York....	<i>Horsepower Plus Value</i> Per H. P. \$0.25 Per \$100 of val. first 3 yrs. .... .40 4th & 5th yrs. .20 Per \$100 of val. subseq. yrs. .... .10 (Minimum fee for 4 cyl. car \$5.00; for 6 cyl. or more \$10.)	<i>Tons Gross Weight</i> 2 tons or less....\$10.00 Each additional ton to 14..... 5.00 14 tons..... 70.00 Each additional ton..... 10.00	<i>Flat Rate</i> \$2.50.	<i>Tons Gross Weight</i> 2 tons or less.....\$ 5.00 Over 2-5..... 10.00 Over 5-7..... 15.00 Over 7-10..... 20.00 Over 10-14..... 30.00 Per ton, over 14...\$5.00
N. Carolina...	<i>Horsepower</i> 24 H.P. or less\$12.50 Over 24-30.... 20.00 Over 30-35.... 30.00 Over 35..... 40.00	<i>Tons Capacity</i> Less than ½.....\$12.50 ½ less than 1.... 15.00 1 less than 2.... 25.00 2 less than 3.... 75.00 3 less than 4.... 200.00 4 and over.....300.00	<i>Flat Rate</i> \$5.00; with side car, \$10.00.	<i>Tons Capacity</i> Per ton.....\$15.00
North Dakota	<i>Value Plus Weight Plus H. P.</i> <i>First Registration</i> On each \$1 cost price...\$0.005 Per 100 lbs. weight..... .20 Per H. P. 10 Electrics..... 2.00 Second registration, 90%; third, 75%; succeeding 60% of first registration (Minimum fee \$5).	Same basis as on pas- senger cars plus	<i>Flat Rate</i> \$3.00.	<i>See Truck Fees</i> Four wheeled trailers, fourth of fee of truck to which it is attached.
Ohio.....	<i>Horsepower</i> 25 H. P. or less\$8.00 Over 25-35.... 12.00 Over 35..... 20.00 <i>Flat Rate</i> Electrics..... 8.00	<i>Horsepower Plus Lbs. Gross Weight</i> Same basis as for pas- senger cars (electrics \$8) plus Per 100 lbs.....\$0.20	<i>Flat Rate</i> \$2.50; with side car, \$4.00.	<i>Flat Rate Plus Lbs. Gross Weight</i> Flat rate.....\$2.50 Per 100 lbs.....\$0.20 (Only applied where gross weight exceeds 1250 pounds)
Oklahoma....	<i>Value</i> \$10, if list price is \$500 or less. Over \$500, add 75¢ per \$100 in excess of \$500.	<i>Lbs. Capacity</i> 1500 or less.....\$15.00 1500-1999..... 20.00 2000-2999..... 25.00 3000-3999..... 40.00 4000-5999..... 60.00 6000-7999..... 100.00 8000 and over.... 300.00 (Reduction of 20% each year for 3 years on vehicles—except those of 5 tons or more cap- acity—which have been licensed for 2 years.) (Minimum fee, \$10).	<i>Value</i> Same basis as for pas- senger cars.	.....X.....

(Continued on

ees on Motor Vehicle Operation

from two preceding pages)

	Registration Fees Dealers	License Fees Operators	Special or Extra Fees on Motor Vehicles Used for Hire	Gasoline Tax (per Gallon)	Personal Property Tax	State
At 5.00 10.00 15.00 20.00 30.00 \$5.00	\$15.00 for first registra- tion; \$5.00 for extra pairs of plates.	Owner—in counties wholly in- cluded in city, \$2.00; renewal, \$1.00. Chau- ffeur, \$5.00; renewal \$2.00, appli- cable every- where.	Special registration fees as follows: 5 passen- gers or less, \$15.00; 6 to 7 passengers, \$24.50; 8 to 10 pas- sengers, \$30.50; 11 to 16 passengers, \$43.00; 17 to 20 passengers, \$52.00; 21 to 22 pas- sengers, \$55.00; 23 to 26 passengers, \$61.50; 27 to 30 passengers, \$67.50; over 30 pas- sengers, \$67.50 plus \$2.00 per passenger over 30. Schedule not applic- able to omnibus oper- ating wholly within municipality under franchise granted by said municipality.	...X...	...No...	...New York
15.00	\$25.00 for first 5 plates; additional plates, \$1.00 per plate.	Owner, none; chauffeur, none.	Extra registration fee of 50% over normal fee.	...1c...	...Yes...	...N. Carolina
ilers, ruck hed.	\$15.00 for 2 sets of plates; extra sets 50c per set.	Owner, none; chauffeur, none.	Extra registration fee for passenger carrying vehicles, 25c per pas- senger of seating cap- acity allowing 16 ins. of seating space per passenger.	...X...	...No...	...N. Dakota
At 2.50 30.20 gross 1250	\$20.00 for each place of business; \$2.00 per set of plates.	Owner, none; chauffeur, none.	.....X.....	...X...	...Yes...	...Ohio
....	\$25.00 for 4 sets of plates and \$12.50 for each additional set.	Owner, none; chauffeur, none.	.....X.....	...X...	...No...	...Oklahoma

d on two following pages)

Annual State Taxes and Fees

(Continued from

State	Registration Fees Passenger Cars	Registration Fees Commercial Cars and Trucks	Registra- tion Fees Motor- cycles	Registration Fees Trailers
	<i>Lbs. Weight</i>	<i>Total Tire Width</i>	<i>Flat Rate</i>	<i>See Truck Fees</i>
Oregon.....	1700 or less... \$15	14 in. or less... \$35.00	Motorcycles	Equipped with solid tire
	Over 1700-2100. 22	Over 14-17..... 42.00	\$6 00; with	50% of solid tired truck
	Over 2100-2500. 28	Over 17-22..... 55.00	side car,	fees; with pneumatic,
	Over 2500-2900. 34	Over 22-26..... 65.00	\$9.00.	50% of pneumatic tired
	Over 2900-3300. 40	Over 26-30..... 105.00	Motorbicy- cles \$3.00.	truck fees.
	Over 3300-3700. 47	Over 30-36..... 126.00		
	Over 3700-4100. 55	Over 36-40..... 140.00		
	Over 4100-4500. 62			
	Over 4500-4900. 71	<i>Pneumatic</i>		
	Over 4900-5300. 79	20 in. or less... \$35.00		
	Over 5300-5700. 88	Over 20-24..... 42.00		
	Over 5700..... 97	Over 24-28..... 49.00		
	<i>Flat Rate</i>	Over 28-32..... 56.00		
Electrics.....	25	Over 32-40..... 70.00		
	<i>Horsepower</i>	<i>Lbs. Chassis Weight</i>	<i>Flat Rate</i>	<i>Lbs. Chassis Weight</i>
Pennsylvania.	Per H. P. \$0.40	2000 less than 3000 \$24.00	Motorcycles	Semi trailer, on truck
	(Minimum fee \$10)	3000 less than 4000 32.00	\$3.00.	basis including chassis
		4000 less than 5000 40.00	Motorbicy- cles \$2.00.	weight of tractor and
		5000 less than 6000 56.00		weight of semi trailer.
		6000 less than 7500 80.00		
		7500 less than 8500 100.00		
		8500 and over.... 140.00		
		<i>Solid</i>		<i>Trailers on Weight Basis</i>
		2000 less than 3000 \$30.00		<i>Lbs.</i>
		3000 less than 4000 40.00		500 less than 750 \$2.00
		4000 less than 5000 50.00		750 less than 1000 5.00
		5000 less than 6000 70.00		1000 less than 2000 10.00
		6000 less than 7500 100.00		2000 or more 15.00
		7500 less than 8500 125.00		
		8500 and over.... 200.00		
		Under 2000 per H. P.		
		\$0.40.		
		Electrics with solid or		
		pneumatic tires, on		
		pneumatic tire basis.		
	<i>Horsepower Plus</i>	<i>Horsepower Plus</i>	<i>Flat Rate</i>	<i>Lbs. Gross Weight</i>
Rhode Island.	<i>Lbs. Gross Weight</i>	<i>Lbs. Gross Weight</i>	\$5.00.	Per 100 lbs. (pneu.) \$0.15
	Per H. P. \$0.25	Same basis as for pas- senger cars.		Per 100 lbs. (solid) .25
	Per 100 lbs.			Per 100 lbs. (metal) .35
	(Pneu.)..... .25			
	Per 100 lbs.			
	(Solid)..... .35			
	Per 100 lbs.			
	(Steel)..... .50			
	<i>Lbs. Weight</i>	<i>Tons Capacity</i>		<i>Flat Rate Plus</i>
South Carolina	2000 lbs. or less \$6.00	1 or less..... \$15.00		<i>Lbs. Capacity</i>
	Per 500 lbs. or	Over 1, less than 2. 30.00		Per trailer..... \$5.00
	fraction there- of in excess of			Per 1000 lbs..... 2.00
	2000 lbs..... 2.00			
	<i>Flat Rate</i>	<i>Tons Capacity</i>	<i>Flat Rate</i>	
South Dakota.	Per vehicle.... \$6.00	2 or less..... \$ 6.00	\$3.00.	..... X.....
		Over 2, less than		
		3½..... 10.00		
		3½ or more..... 15.00		

(Continued on

Fees on Motor Vehicle Operation

(continued from two preceding pages)

Registration Fees Dealers	License Fees Operators	Special or Extra Fees on Motor Vehicles Used for Hire	Gasoline Tax (per Gallon)	Personal Property Tax	State
\$30.00 for first set of plates; additional sets, \$5.00 per set.	Owner, none; chauffeur, \$2.00.	For passenger carriers extra registration fee of \$4.00 per passenger allowing 20 ins. of seating space per pas- senger. For property carriers extra regis- tration fee of 50c per inch of total tire width. In addition for both passenger and property carriers an annual fee for ad- ministration of motor vehicle common car- rier laws of not more than \$10.00 per ve- hicle.	...2c...	..No...	.....Oregon
\$10.00 per set. Motor- cycles, \$5.00 per set.	Owner, none; chauffeur, \$2.00.	.....X.....	...1c...	..No...	.....Pennsylvania
\$30.00 for 3 sets of plates. \$10.00 per set over 3.	Owner, \$2.00; chauffeur, \$2.00.	Extra registration fee of 100% over normal fee.	...X...	..Yes...	.....Rhode Island
.....X.....	Owner, none; chauffeur, none.	.....X.....	...1c...	..Yes...	.....S. Carolina
\$25.00 for 3 sets of plates; additional sets \$6.00 per set. Motorcycles, \$5.00 for 6 plates; ad- ditional plate \$3.00 per plate.	Owner, none; chauffeur, none.	.....X.....	...1c...	..Yes...	.....S. Dakota

(continued on two following pages)

Annual State Taxes and Fees

(Continued from

State	Registration Fees Passenger Cars	Registration Fees Commercial Cars and Trucks	Registra- tion Fees Motor- cycles	Registration Fees Trailers
Tennessee.....	<i>Horsepower</i> Per H. P..... \$ 0.50 <i>Flat Rate</i> Electrics..... 25.00	<i>Horsepower Plus Tons Capacity</i> Per H. P.....\$ 0.50 Per ton capacity.. 5.00 <i>Flat Rate</i> Electrics..... 25.00 Plus \$5 per ton capacity.	<i>Horsepower</i> Same basis as for pas- senger cars.	.....X.....
Texas.....	<i>Horsepower</i> Per H. P.....\$0.35 (Minimum fee \$7.50)	<i>Lbs. Capacity</i> <i>Pneu. Solid</i> 2000-3000. 30.00 36.00 3001-4000. 40.00 48.00 4001-5000. 50.00 60.00 5001-6000. 65.00 78.00 6001-7000. 80.00 96.00 7001-8000.100.00 120.00 8001-9000.120.00 144.00 9001-10000.150.00 180.00 (Under 2000 pounds ca- pacity on passenger car basis and rates) In addition counties charge tax according to lbs. capacity ranging from $\frac{1}{8}$ c to 4c per mile traveled.	<i>Flat Rate</i> \$3.00.	<i>Lbs. Gross Weight</i> Per 100 lbs. (pneu.) \$0.15 Per 100 lbs. (solid) .25 Per 100 lbs. (metal) .35
Utah.....	<i>Horsepower</i> 25 H.P. or less \$10.00 Over 25-40... 15.00 Over 40-50... 20.00 Over 50..... 25.00 <i>Flat Rate</i> Electrics..... 15.00 <i>Horsepower</i> Steam Cars 15 H.P. or less \$10.00 Over 15-25... 15.00	<i>Tons Capacity</i> <i>Pneu. Solid</i> 1 or less... 20.00 27.50 1 $\frac{1}{2}$ 25.00 35.00 2..... 30.00 45.00 2 $\frac{1}{2}$ 35.00 55.00 3..... 45.00 65.00 3 $\frac{1}{2}$ 55.00 80.00 4..... 65.00 100.00 4 $\frac{1}{2}$ 75.00 120.00 5..... 90.00 140.00 Per ton over 5... 50.00 50.00 <i>Metal Tires</i> 1.....\$ 40.00 1 $\frac{1}{2}$ 60.00 2..... 80.00	<i>Flat Rate</i> Motor- cycles, \$5.00; Mo- torbicycles \$3.00.	<i>Tons Capacity</i> <i>Pneu. Solid</i> 1 or less... \$10.00 \$15.00 2 or less... 15.00 25.00 3 or less... 25.00 40.00 4 or less... 40.00 60.00 5 or less... 50.00 75.00 <i>Metal</i> $\frac{1}{4}$.....\$15.00 1..... 25.00 2..... 50.00
Vermont.....	<i>Horsepower</i> 1st Registration Year Per H. P.....\$1.00 2d Registration Year Per H. P.....\$0.75 3rd Registration Year Per H. P.....\$0.50 Subsequent Years Per H. P.....\$0.50	<i>Tons Capacity</i> $\frac{1}{4}$ -1.....\$20.00 Over 1-1 $\frac{1}{2}$ 30.00 Over 1 $\frac{1}{2}$ -2..... 40.00 Over 2-2 $\frac{1}{2}$ 50.00 Over 2 $\frac{1}{2}$ -3..... 75.00 Over 2-4.....100.00 Each additional ton over 4..... 25.00	<i>Flat Rate</i> \$7.50.	.....X.....
Virginia.....	<i>Horsepower</i> Per H. P.....\$0.60 (Minimum fee \$10)	<i>Tons Capacity</i> First ton.....\$15.00 Each additional $\frac{1}{2}$ ton..... 5.00	<i>Horsepower</i> Same basis as passen- ger cars. Minimum fee \$5.00; with side car \$7.00.	<i>Tons Capacity</i> First ton.....\$10.00 Each additional half ton..... 3.00

(Continued on

ees on Motor Vehicle Operation

from two preceding pages)

Registration Fees Dealers	License Fees Operators	Special or Extra Fees on Motor Vehicles Used for Hire	Gasoline Tax (per Gallon)	Personal Property Tax	State
\$25.00 for first registration. Duplicate sets of plates 50c.	Owner, none; chauffeur, none.	.....X.....	...X...	..No...	.....Tennessee
\$15.00; extra sets of plates, \$5.00 per set.	Owner, none; chauffeur, \$3.00.	Carrying persons or property for hire 35c per horse-power plus \$1 per person of seating capacity over 7, plus county fee of 1/2c to 4c per mile travelled according to net carrying capacity.	...X...	..Yes...	.....Texas
\$25.00 for first registration; \$4.00 per set of additional plates.	Owner, none; chauffeur, \$2.00.	.....X.....	...X...	..Yes...	.....Utah
\$50.00 for "sufficient number" of temporary plates.	Owner, \$2.00; chauffeur, \$3.00; examination, \$2.00 extra.	.....X.....	...X...	..No...	.....Vermont
\$50.00 for 3 sets of plates, additional sets, \$15.00 per set.	Owner, none; chauffeur, \$5.00.	Extra annual tax of \$5.00 per vehicle in cities and towns less than 5000 population; \$10.00 per vehicle where population is 5000 or over.	...X...	..Yes...	.....Virginia

and on two following pages)

Annual State Taxes and Fees

(Continued from

State	Registration Fees Passenger Cars	Registration Fees Commercial Cars and Trucks	Registration Fees Motor- cycles	Registration Fees Trailers
	<i>Lbs. Weight</i>	<i>Lbs. Weight</i>	<i>Flat Rate</i>	<i>Lbs. Weight</i>
Washington..	1500 lbs. or less \$10.00 Per 100 lbs. over 1500... .60	1500 or less.....\$10.00 Per 100 lbs. over 1500-6500..... .40 6500..... .50	\$6.00.	Same basis as for trucks.
	<i>Horsepower Plus Lbs. Gross Weight</i>	<i>Tons Capacity</i>		<i>Tons Capacity</i>
W. Virginia...	Per H. P. ....\$0.30 Per 100 lbs. gross weight... .30 (Passengers reckoned at 125 lbs. each, times seating capacity)	<i>Solid Rubber</i> 1 or less.....\$25.00 Over 1-2..... 50.00 Over 2-3..... 75.00 Over 3-4..... 100.00 Over 4-5..... 150.00 <i>Pneu.</i> : Same basis as for passenger car. Tractors drawing trailers \$20.00 for gross weight of 2 tons or less to \$180.00 for 11 tons gross weight.	<i>Flat Rate</i> \$5.00; with side cars \$7.50.	<i>Solid Rubber and Metal</i> 1 or less.....\$10.00 Per ton over 1.... 15.00 <i>Pneumatic</i> Half above fees.
Wisconsin....	<i>Flat Rate</i> \$10.00	<i>Lbs. Capacity</i> Less than 2100...\$15.00 2100 less than 5100 20.00 5100 or more..... 25.00	<i>Flat Rate</i> \$4.00.	.....X.....
Wyoming.....	<i>Horsepower</i> 22 or less.....\$ 8.00 Over 22-30... 12.00 Over 30-40... 16.00 Over 40..... 20.00	<i>Tons Capacity</i> 1 or less.....\$15.00 Over 1-2..... 30.00 <i>Pneumatic Tires on Drive Wheels</i> Over 2-3.....\$50.00 Over 3-4..... 75.00 Over 4-5..... 100.00 Over 5..... 150.00 Other than pneumatic tires on drive wheels \$10.00 extra.	<i>Flat Rate</i> \$5.00.	<i>Tons Capacity</i> 500 lbs. or less no fee. Over 500 lbs. on truck fee basis.

Annual State Taxes and Fees

States All	Registration Fees Passenger Cars	Registration Fees Commercial Cars and Trucks	Registration Fees Motor- cycles	Trailers
	<i>Horsepower Plus Lbs. Gross Weight</i>	<i>Horsepower Plus Lbs. Gross Weight</i>	<i>Flat Rate</i>	<i>Lbs. Gross Weight</i>
	Per H. P. ....25¢	Same basis as for Passenger Cars	\$5.00	<i>Tires</i> <i>Pneu.</i> <i>Solid</i> <i>Metal</i>
	<i>Tires</i> Pneu. 25¢ Solid 35¢ Metal 50¢ Gross weight to be regarded as actual weight of the vehi- cle, plus the sum of the adult seat- ing capacity multi- plied by 150 pounds.			<i>Per 100 Pounds</i> 15¢ 25¢ 35¢

on Motor Vehicle Operation

(two preceding pages)

Registration Fees Dealers	License Fees Operators	Special or Extra Fees on Motor Vehicles Used for Hire	Gasoline Tax (per Gallon)	Personal Property Tax	State
\$50.00 for first registration; additional sets of plates, \$10.00. Motorcycles, \$10.00	Owner and chauffeur, \$1.00, biennial renewal at same rate.	Extra annual registration fees; passenger carriers; for vehicles with seating capacity of 8 or less, \$10.00; 50¢ per passenger over 8. For property carriers, \$10.00 for vehicle of 3 tons or less, capacity; \$1.00 per ton of capacity over 3 tons.	...1c...	..Yes...	...Washington
\$30.00 for first registration and 2 sets of plates; extra sets, \$15.00 per set. Motorcycles \$10.00 for first registration and 2 sets of plates; extra sets, \$5.00 per set.	Operator, \$1.00, perpetual; chauffeur, \$3.00.	For passenger carriers extra registration fee roughly 100% greater than normal annual fees.	...X...	..Yes...	...West Virginia
\$25.00 for 2 sets of plates.	Owner, none; chauffeur, none.	Special fee for passenger carriers operating wholly within a municipality, \$10.00 per vehicle which is in lieu of regular fee.	...X...	..Yes...	....Wisconsin
\$25.00 for 2 sets of plates. Each additional set, \$2.00. Motorcycles, \$10.00, each additional set, \$1.00.	Owner, none; chauffeur, none.	.....X.....	...X...	..Yes...	.....Wyoming

Advocated by Proposed Uniform Vehicle Law

Registration Fees Dealers	License Fees Operators	Special or Extra Fees on Motor Vehicles Used for Hire	Gasoline Tax (per Gallon)	Personal Property Tax	States
Registration and first 5 sets of plates \$25.00. Additional Sets, \$2.00 per set.	Chauffeurs and Owners \$2.00 each. Perpetual.	Used for transportation of persons for hire, double the normal rates.	...X...	..No...	All

NOTE: The Special Committee which drafted the Proposed Uniform Vehicle Law selected horsepower and gross weight of motor vehicles as the proper bases for registration fees because of the relationship which these factors bear to the wear of vehicular travel upon highways.

The Proposed Uniform Vehicle Law further recommends that the proceeds from these fees be used exclusively for highway purposes. In this connection the Motor Vehicle Conference Committee believes that these highway purposes should only include maintenance and repair of highways properly located and adequately built to carry motor vehicle transportation efficiently and economically. The Conference Committee regards as unsound and inequitable the use of such money for capital outlays involved in highway construction and reconstruction.

Associations of the Automobile Industry

National Automobile Chamber of Commerce

GENERAL OFFICES: Marlin-Rockwell Building, 366 Madison Avenue, at 46th Street, New York, N. Y.

PRESIDENT: Charles Clifton, Chairman of the Board of Pierce-Arrow Motor Car Company, Buffalo, N. Y.

GENERAL MANAGER: Alfred Reeves.

The National Automobile Chamber of Commerce is the successor of the National Association of Automobile Manufacturers, organized in November, 1900, and of the Automobile Board of Trade.

OBJECTS: To promote the interests of those engaged in automobile manufacture, and to develop the use of the motor vehicles as a motor transport unit of maximum public service.

Through its organization, committees, and departments the N. A. C. C. works along the following lines:

Diffusion of information as to inventions, patents, state of the art, and conditions of trade in which members are engaged.

Acquiring, holding and disposing of property including patents and rights for the benefit of members but not for the profit of the Chamber.

Securing equitable railroad rates and service.

Opposing unjust legislation, and recommending constructive uniform laws concerning fees, insurance and traffic.

Encouraging the extension of foreign trade, and investigating the possibilities of markets abroad.

Management of two annual automobile shows, one in New York and one in Chicago.

Urging the construction of better highways, adequately maintained, and planned so as to give the greatest economic benefit to the nation.

Recommending a definite and equitable program for federal taxation.

Furthering standardization in engineering and manufacturing for the ultimate benefit of the public.

Developing improved methods of servicing cars and trucks.

Settling differences between members.

Promoting and enlarging friendly intercourse among men in the industry.

Co-operating with allied associations in the industry for the common good.

Investigating motor vehicle market conditions.

Developing complete statistics on the production, distribution and use of the motor cars and motor trucks, and on the relationship of these to the economics of general business.

Membership: Passenger car makers, 92; truck makers, 60. More regarding the Chamber's organization, committees and membership will be found on pages 86-93.

Motor and Accessory Manufacturers Association

GENERAL OFFICES: Aeolian Building, 33 West 42nd Street, New York.

PRESIDENT: E. H. Broadwell, Fisk Rubber Co., Chicopee Falls, Mass.

GENERAL MANAGER: M. L. Heminway.

National organization representing interests of automotive parts and equipment manufacturers. Association has automobile show, credit, educational, and traffic departments. Field secretary has been appointed to keep in direct touch with members.

National Automobile Dealers' Association

GENERAL OFFICES: 320 North Grand Avenue, St. Louis, Mo.

PRESIDENT: W. J. Brace, Kansas City, Mo.

SECRETARY AND GENERAL MANAGER: C. A. Vane.

Object is promotion of automobile dealer business, constructive publicity on dealer aims, maintenance of high merchandising standards, research on the magnitude of the business, study of markets and dissemination of facts concerning the same, opposition to harmful legislation, support of good legislation, promotion of good roads.

Society of Automotive Engineers

GENERAL OFFICES: 29 West 39th St., New York City.

PRESIDENT: B. B. Bachman, Autocar Co., Ardmore, Pa.

SECRETARY AND GENERAL MANAGER: Coker F. Clarkson.

Object of society is to promote the arts,

sciences, standards, and engineering practices connected with the design and construction of automobile and other automotive vehicles and apparatus, of all forms of self-propelled or mechanically propelled mediums for the transportation of passengers or freight, and prime-movers. Publications are *Transactions*, (semi-annual) *Year Book*, *Journal* (monthly), and *Hand Book of Data Sheets*, including *Standards and Recommended Practices* (revised semi-annually). Nearly three hundred distinct mechanical and material standards, specifications, mounting dimensions of parts and accessories have been established by S. A. E. Membership over 5000.

American Automobile Association

GENERAL HEADQUARTERS: 1108 Sixteenth Street, Washington, D. C.

NEW YORK CITY OFFICES: 501 Fifth Avenue.

PRESIDENT: George C. Diehl, New York.

EXECUTIVE CHAIRMAN: D. L. Morgan.

Composed of associations and clubs throughout the country and thousands of individual members, the A.A.A. is now well on its way toward a half million membership. It was organized at Chicago, in March, 1902. Its objects, briefly stated, are:

To unite in one body all the automobile clubs and individual motorists of the country.

To secure reasonable and just legislation and to aid in proper enforcement of automobile laws and ordinances.

To obtain local, State, and Federal aid in the construction and maintenance of good roads.

To encourage road travel and transportation, and to secure, prepare, and disseminate information relative thereto.

To support sportsmanlike contests and other movements that will advance motoring interests.

Rubber Association of America

GENERAL OFFICES: 52 Vanderbilt Avenue, New York City.

PRESIDENT: Harry T. Dunn.

SECRETARY AND GENERAL MANAGER: A. L. Viles.

A national trade organization embracing rubber manufacturers, importers, brokers and dealers in crude rubber, reclaimers and supply manufacturers of the United States and Canada.

Its membership consists of more than four hundred firms, and its object is to promote in all lawful ways the commercial interests of its members, and secure the advantages to be obtained through mutual co-operation, also to stimulate social intercourse among those connected with the rubber industry and commerce and in general for the promotion of the welfare of the rubber industry.

Its work is largely carried on through the media of "Divisions" or "Committees" constituted of the members of the Association engaged in a particular branch of the rubber industry.

Motor Vehicle Conference Committee

OFFICES: Room 1408, Marlin-Rockwell Building, 366 Madison Avenue at 46th Street, New York City.

The Motor Vehicle Conference Committee, created the early part of 1920, is composed of representatives from the following organizations: American Automobile Association, Motor and Accessory Manufacturers Association, National Automobile Chamber of Commerce, National Automobile Dealers Association, Rubber Association of America and the Trailer Manufacturers Association of America.

This Committee acts as a clearing house for the problems which, in increasing numbers, are confronting the individual members of its component organizations.

Trailer Manufacturers' Association of America

GENERAL OFFICES: 160 West 87th Street, New York, Phone Schuyler 2243.

PRESIDENT: J. H. Fertig, Newark, N. Y.

GENERAL MANAGER: L. G. Meldran.

Object is: To promote the trailer industry, foster and encourage the introduction and use of trailers, further construction and maintenance of good roads, aid in securing uniform laws relating to use of trailers, and to gather and disseminate information regarding these activities.

Automotive Equipment Association

GENERAL OFFICES: 1818 City Hall Square Building, Chicago, Ill.

(Continued on following page)

ASSOCIATIONS OF AUTOMOBILE INDUSTRY

(Continued from preceding page)

PRESIDENT: H. M. Dine, Canton, Ohio.
EXECUTIVE CHAIRMAN: Wm. M. Webster, Chicago, Ill.

The organization is international in its scope.

OBJECT: To promote and create a friendly and harmonious relation between manufacturers, jobbers, dealers and garage men and all organized effort incident to or

connected with the Automotive Industry, including automobiles, trucks, tractors, air motors, etc.; to encourage legislation, local, State and National, in the advancement of the automotive interests; for the making of better roads; to collect, collate and disseminate information of interest to the trade generally.

Automotive Schools in U. S. A.

ALABAMA

K. of C., Birmingham. (Colored School)
K. of C., Mobile

ARIZONA

Y. M. C. A., Bisbee

ARKANSAS

K. of C., Little Rock

CALIFORNIA

Y. M. C. A., Los Angeles
K. of C., Los Angeles
National Automotive School, Los Angeles
K. of C., Oakland
K. of C., San Francisco
Modern Automobile and Tractor Schools, Inc.,
San Francisco
Heald's Engineering & Auto School, Van Ness
and Post Streets, San Francisco

COLORADO

Y. M. C. A., Denver
K. of C., Denver
K. of C., Pueblo

CONNECTICUT

Y. M. C. A., Hartford
K. of C., New Haven
Y. M. C. A., New London

DISTRICT OF COLUMBIA

American Motor Schools, 1612 U Street, N. W.,
Washington
Y. M. C. A., Washington
K. of C., Washington

FLORIDA

K. of C., Jacksonville. (Colored School)

GEORGIA

K. of C., Savannah. (Colored School)

ILLINOIS

American School of Correspondence. (Correspondence Course), 58th St. and Drexel Ave.,
Chicago
Greer College of Automotive Engineering,
2024 Wabash Ave., Chicago
K. of C., Chicago. (Three Schools)
Y. M. C. A., Moline
K. of C., Peoria

INDIANA

K. of C., Fort Wayne
K. of C., Indianapolis

IOWA

Y. M. C. A., Davenport
Iowa State Automobile & Tractor School,
Sioux City

KANSAS

Hutchinson Auto & Tractor School, Hutchinson
K. of C., Topeka

KENTUCKY

K. of C., Louisville
Y. M. C. A., Louisville (Central Branch)

LOUISIANA

K. of C., New Orleans

MARYLAND

K. of C., Baltimore

MASSACHUSETTS

Y. M. C. A., Boston
K. of C., Fall River
K. of C., Fitchburg
K. of C., Greenfield
Y. M. C. A., Lynn
Y. M. C. A., Worcester
K. of C., Worcester

MICHIGAN

Michigan State Auto School, 3729 Woodward Ave., Detroit
 Detroit Institute of Technology
 Y. M. C. A., Flint
 K. of C., Grand Rapids
 Y. M. C. A., Lansing

MINNESOTA

K. of C., Duluth
 K. of C., St. Paul
 Modern Automobile & Tractor Schools, Inc., St. Paul
 Y. M. C. A., St. Paul

MISSOURI

Y. M. C. A., St. Louis
 K. of C., St. Louis

MISSISSIPPI

K. of C., Vicksburg

NEBRASKA

K. of C., Omaha

NEW JERSEY

Y. M. C. A., Camden
 K. of C., Jersey City
 K. of C., Newark
 Y. M. C. A., Newark
 Y. M. C. A., Passaic
 K. of C., Paterson

NEW YORK

K. of C., Binghamton
 K. of C. Buffalo
 K. of C., Evening School No. 5, 240 W. 51st St. New York
 K. of C., New York. (240 W. 51st St.)
 K. of C., New York. (2755 Webster Ave.)
 Stewart Automobile School, 225 West 57th St. New York
 Y. M. C. A., 318 West 57th St., (West Side Branch), New York
 Y. M. C. A. (Bedford Branch), Brooklyn
 Y. M. C. A., Buffalo
 Y. M. C. A., Syracuse
 K. of C., Yonkers

NORTH DAKOTA

K. of C., Fargo

OHIO

Y. M. C. A., Canton
 Y. M. C. A., Cincinnati
 K. of C., Cincinnati
 Cleveland Automobile School, 1815 East 24th St., Cleveland
 K. of C., Cleveland
 K. of C., Dayton
 Y. M. C. A., Toledo
 Y. M. C. A., Youngstown

OKLAHOMA

Oklahoma City Automobile School, 1218 N. Western Ave., Oklahoma City
 K. of C., Oklahoma City

OREGON

Y. M. C. A., Portland
 K. of C., Portland

PENNSYLVANIA

Spring Garden Institute, Broad and Spring Sts. Philadelphia
 Y. M. C. A. (Central Branch), Philadelphia
 K. of C., Philadelphia
 K. of C., Pittsburgh
 Y. M. C. A. (East Liberty Branch), Pittsburgh
 International Correspondence School, Scranton, Pa.

RHODE ISLAND

Y. M. C. A., Providence
 K. of C., Providence

SOUTH DAKOTA

K. of C., Aberdeen
 K. of C., Sioux Falls

TENNESSEE

K. of C., Memphis
 K. of C., Memphis. (Colored School)
 K. of C., Nashville
 Automobile College of Nashville, Nashville
 K. of C., Vicksburg

TEXAS

K. of C., Dallas
 K. of C., El Paso
 K. of C., Fort Worth
 K. of C., Houston
 K. of C., San Antonio

VIRGINIA

K. of C., Norfolk
 K. of C., Richmond

WASHINGTON

Modern Automobile & Tractor Schools, Inc., Seattle
 Y. M. C. A., Seattle
 K. of C., Seattle
 Modern Automobile & Tractor Schools, Inc., Spokane
 K. of C., Spokane
 K. of C., Tacoma

WEST VIRGINIA

K. of C., Wheeling

WISCONSIN

K. of C., Milwaukee

TERRITORY OF HAWAII

Y. M. C. A., Honolulu

Organization of National Automobile Chamber of Commerce, Inc.

Marlin-Rockwell Building, 366 Madison Ave. at 46th St., New York City, U. S. A.

Washington, D. C.
Albee Building

Detroit, Mich.
Ford Building

OFFICERS

CHARLES CLIFTON, <i>President</i>	Pierce-Arrow Motor Car Company
R. D. CHAPIN, <i>Vice-President</i>	Hudson Motor Car Company
C. C. HANCH, <i>Second Vice-President</i>	Lexington Motor Company
Passenger Car Division	
WINDSOR T. WHITE, <i>Second Vice-President</i>	The White Motor Company
Motor Truck Division	
A. J. BROUSSEAU, <i>Secretary</i>	Mack Bros. Motor Car Company
H. H. RICE, <i>Treasurer</i>	Cadillac Motor Car Company

BOARD OF DIRECTORS

A. J. BROUSSEAU.....	Mack Bros. Motor Car Company
R. D. CHAPIN.....	Hudson Motor Car Company
CHARLES CLIFTON.....	The Pierce-Arrow Motor Car Company
J. WALTER DRAKE.....	Hupp Motor Car Corporation
A. R. ERSKINE.....	The Studebaker Corporation of America
C. C. HANCH.....	Lexington Motor Company
F. J. HAYNES.....	Dodge Brothers
H. M. JEWETT.....	Paige-Detroit Motor Car Company
ALVAN MACAULEY.....	Packard Motor Car Company
W. E. METZGER.....	The Columbia Motors Company
R. E. OLDS.....	Reo Motor Car Company
H. H. RICE.....	Cadillac Motor Car Company
J. A. HASKELL.....	General Motors Truck Company
WINDSOR T. WHITE.....	The White Motor Company
JOHN N. WILLYS.....	Willys-Overland Company

EXECUTIVE OFFICERS

ALFRED REEVES, <i>General Manager</i>	National Automobile Chamber of Commerce
J. S. MARVIN, <i>Assistant Gen. Manager</i>	National Automobile Chamber of Commerce
S. A. MILES, <i>Show Manager</i>	National Automobile Chamber of Commerce

COMMITTEES

ADVERTISING COMMITTEE

EDWARD S. JORDAN, <i>Chairman</i>	Jordan Motor Car Company
W. K. TOWERS.....	Paige-Detroit Motor Car Company
L. B. DUDLEY.....	Federal Motor Truck Company
A. B. BATTERSON.....	Buick Motor Company
G. U. RADOYE.....	The Haynes Automobile Company
JOHN C. LONG, <i>Secretary</i>	National Automobile Chamber of Commerce

FOREIGN TRADE COMMITTEE

J. WALTER DRAKE, <i>Chairman</i>	Hupp Motor Car Corporation
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H. M. ROBINS.....Dodge Brothers
 JAY P. RATHBUN.....The White Motor Company
 L. J. OLLIER.....The Studebaker Corporation of America
 H. B. PHIPPS.....Hudson Motor Car Company
 GEORGE F. BAUER, *Secretary*.....National Automobile Chamber of Commerce

HAND BOOK COMMITTEE

E. T. STRONG, *Chairman*.....Buick Motor Company
 R. C. RUESCHAW.....Reo Motor Car Company
 GEORGE A. KISSEL.....Kissel Motor Car Company
 A. L. CURTIS, *Secretary*.....National Automobile Chamber of Commerce

HIGHWAYS COMMITTEE

R. D. CHAPIN, *Chairman*.....Hudson Motor Car Company
 GEORGE M. GRAHAM.....The Chandler Motor Car Company
 W. E. METZGER.....The Columbia Motors Company
 EDWARD S. JORDAN.....Jordan Motor Car Company
 A. J. BROSSAU.....Mack Bros. Motor Car Company
 PYKE JOHNSON, *Secretary*.....National Automobile Chamber of Commerce
 Washington Office

INSURANCE COMMITTEE

W. E. METZGER, *Chairman*.....The Columbia Motors Company
 C. W. CHURCHILL.....Buick Motor Company
 MILTON TIBBETTS.....Packard Motor Car Company
 STEWART McDONALD.....Moon Motor Car Company
 E. A. WILLIAMS, JR.....The Garford Motor Truck Company
 M. L. PULCHER.....Federal Motor Truck Company
 E. E. STAUB.....Hudson Motor Car Company
 J. S. MARVIN, *Secretary*.....National Automobile Chamber of Commerce

LEGISLATIVE COMMITTEE

H. H. RICE, *Chairman*.....Cadillac Motor Car Company
 D. C. FENNER.....Mack Bros. Motor Car Company
 J. I. FARLEY.....Auburn Automobile Company
 DAVID S. LUDLUM.....The Autocar Company
 H. P. DOOLITTLE.....International Harvester Company
 HARRY MEIXELL, *Secretary*.....National Automobile Chamber of Commerce

MEMBERSHIP COMMITTEE

ALVAN MACAULEY.....Packard Motor Car Company
 A. J. BROSSAU.....Mack Bros. Motor Car Company
 R. E. OLDS.....Reo Motor Car Company

MOTOR FUELS COMMITTEE

JOHN N. WILLYS, *Chairman*.....Willys-Overland Company
 ALVAN MACAULEY.....Packard Motor Car Company
 C. W. NASH.....The Nash Motors Company
 E. A. WILLIAMS, JR.....Garford Motor Truck Company
 S. E. ACKERMAN.....H. H. Franklin Manufacturing Company
 MOIE COOK.....Service Motor Truck Company
 S. A. MILES, *Secretary*.....National Automobile Chamber of Commerce

(Continued on following page)

Organization of National Automobile Chamber of Commerce, Inc.

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MOTOR TRUCK COMMITTEE

WINDSOR T. WHITE, <i>Chairman</i>	The White Motor Company
E. A. WILLIAMS, JR.....	The Garford Motor Truck Company
M. L. PULCHER.....	Federal Motor Truck Company
R. H. SALMONS.....	Selden Truck Corporation
D. C. FENNER.....	Mack Bros. Motor Car Company
DAVID S. LUDLUM.....	The Autocar Company
ROBERT O. PATTEN.....	The Pierce-Arrow Motor Car Company
RAY E. CHAMBERLAIN.....	Packard Motor Car Company
F. E. SMITH.....	Republic Motor Truck Company
F. W. FENN, <i>Secretary</i>	National Automobile Chamber of Commerce

PASSENGER CAR SHOW COMMITTEE

H. M. JEWETT, <i>Chairman</i>	Paige-Detroit Motor Car Company
F. C. CHANDLER.....	The Chandler Motor Car Company
J. WALTER DRAKE.....	Hupp Motor Car Corporation
S. A. MILES, <i>Manager</i>	National Automobile Chamber of Commerce

PASSENGER CAR STANDARDS COMMITTEE

HOWARD C. MARMON, <i>Chairman</i>	Nordyke & Marmon Company
N. E. WAHLBERG.....	The Nash Motors Company
H. T. THOMAS.....	Reo Motor Car Company
GEORGE B. ALLEN.....	Liberty Motor Car Company
GEORGE E. GODDARD.....	Dodge Brothers

PATENTS COMMITTEE

C. C. HANCH, <i>Chairman</i>	Lexington Motor Company
WILFRED C. LELAND.....	Lincoln Motor Company
WM. MACGLASHAN.....	The Studebaker Corporation of America
JOHN L. PRATT.....	General Motors Corporation
A. J. BROSSAU.....	Mack Bros. Motor Car Company
R. A. BRANNIGAN, <i>Department Manager</i>	National Automobile Chamber of Commerce

SERVICE COMMITTEE

L. C. VOYLES, <i>Chairman</i>	Nordyke & Marmon Company
A. B. CUMNER.....	The Autocar Company
F. A. BONHAM.....	Chevrolet Motor Company
J. B. BRAY.....	Grant Motor Car Corporation
F. J. WELLS.....	The Pierce-Arrow Motor Car Company
H. R. COBLEIGH, <i>Secretary</i>	National Automobile Chamber of Commerce

TAXATION COMMITTEE

C. C. HANCH, <i>Chairman</i>	Lexington Motor Company
H. H. RICE.....	Cadillac Motor Car Company
J. WALTER DRAKE.....	Hupp Motor Car Corporation

F. I. BARROWS.....	Lexington Motor Company
CHARLES CLIFTON.....	The Pierce-Arrow Motor Car Company
PYKE JOHNSON, <i>Secretary</i>	National Automobile Chamber of Commerce Washington Office

TRAFFIC COMMITTEE

W. E. METZGER, <i>Chairman</i>	The Columbia Motors Company
A. T. WATERFALL.....	Dodge Brothers
F. C. CHANDLER.....	The Chandler Motor Car Company
WILLIAM L. DAY.....	General Motors Truck Company
GEORGE M. DICKSON.....	National Motor Car & Vehicle Corporation
J. S. MARVIN, <i>Department Manager</i>	National Automobile Chamber of Commerce

TRUCK STANDARDS COMMITTEE

D. C. FENNER, <i>Chairman</i>	Mack Bros. Motor Car Company
F. A. WHITTEN.....	General Motors Truck Company
E. M. STERNBERG.....	Sterling Motor Truck Company
A. MOOREHOUSE.....	Packard Motor Car Company

GOVERNMENT RELATIONS COMMITTEE

J. WALTER DRAKE, <i>Chairman</i>	Hupp Motor Car Corporation
E. A. WILLIAMS, JR.....	The Garford Motor Truck Company
PERCY OWEN.....	Liberty Motor Car Company
ALFRED H. SWAYNE.....	General Motors Corporation
A. T. WATERFALL.....	Dodge Brothers

NATIONAL COUNCILLORS TO CHAMBER OF COMMERCE
OF U. S. A.

A. J. BROSSAU.....Mack Bros. Motor Car Company
ALFRED H. SWAYNE.....General Motors Corporation

REPRESENTING AUTOMOTIVE INDUSTRY IN CONFERENCE WITH REPRESENTATIVES OF OIL INDUSTRY

JOHN N. WILLYS, <i>Chairman</i>	Willys-Overland Company
ALVAN MACAULEY.....	Packard Motor Car Company
C. W. NASH.....	Nash Motors Company
H. L. HORNING.....	Representing Motor and Accessory Manufacturers Association
C. F. KETTERING.....	Representing Society of Automotive Engineers

REPRESENTATIVES ON NATIONAL INDUSTRIAL CONFERENCE BOARD

H. H. RICE.....	Cadillac Motor Car Company
A. J. BROSEAU.....	Mack Bros. Motor Car Company

EDUCATIONAL DEPARTMENT

JOHN C. LONG, *Secretary*.....National Automobile Chamber of Commerce

Members of National Automobile

PASSENGER CAR

<i>Trade Name of Car</i>	<i>Members</i>	<i>Address</i>
Allen.....	Allen Motor Company.....	Columbus, Ohio
Ambassador.....	Yellow Cab Mfg. Company.....	Chicago, Ill.
Anderson.....	Anderson Motor Company.....	Rock Hill, S. C.
Apperson.....	Apperson Bros. Automobile Company.....	Kokomo, Ind.
Auburn.....	Auburn Automobile Company.....	Auburn, Ind.
Brewster.....	Brewster & Company.....	Long Island City, N. Y.
Buick.....	Buick Motor Company.....	Flint, Mich.
Cadillac.....	Cadillac Motor Car Company.....	Detroit, Mich.
Case.....	J. I. Case T. M. Company.....	Racine, Wis.
Chalmers.....	Chalmers Motor Company.....	Detroit, Mich.
Chandler.....	Chandler Motor Car Company.....	Cleveland, Ohio
Chevrolet.....	Chevrolet Motor Company.....	Detroit, Mich.
Cleveland.....	Cleveland Automobile Company.....	Cleveland, Ohio
Cole.....	Cole Motor Car Company.....	Indianapolis, Ind.
Columbia.....	Columbia Motors Company.....	Detroit, Mich.
Commonwealth.....	Commonwealth Motors Company.....	Chicago, Ill.
Crow-Elkhart.....	Crow-Elkhart Motor Corporation.....	Elkhart, Ind.
Cunningham.....	Jas. Cunningham Son & Company.....	Rochester, N. Y.
Daniels.....	Daniels Motor Company.....	Reading, Pa.
Davis.....	Geo. W. Davis Motor Car Company.....	Richmond, Ind.
Detroit Electric.....	Detroit Electric Car Company.....	Detroit, Mich.
Dixie Flyer.....	Kentucky Wagon Mfg. Company.....	Louisville, Ky.
Dodge Brothers.....	Dodge Brothers.....	Detroit, Mich.
Dorris.....	Dorris Motor Car Company.....	St. Louis, Mo.
Dort.....	Dort Motor Car Company.....	Flint, Mich.
du Pont.....	du Pont Motors, Inc.....	Wilmington, Del.
Durant.....	Durant Motors Company of New York.....	New York, N. Y.
Earl.....	Earl Motors, Inc.....	Jackson, Mich.
Elcar.....	Elkhart Carriage & Motor Car Company.....	Elkhart, Ind.
Elgin.....	Elgin Motor Car Corporation.....	Argo, Ill.
Essex.....	Essex Motors.....	Detroit, Mich.
Franklin.....	H. H. Franklin Manufacturing Company.....	Syracuse, N. Y.
Gardner.....	Gardner Motor Company.....	St. Louis, Mo.
Grant.....	Grant Motor Car Corporation.....	Cleveland, Ohio
Handley-Knight.....	Handley-Knight Company.....	Kalamazoo, Mich.
Hanson.....	Hanson Motor Company.....	Atlanta, Ga.
Haynes.....	Haynes Automobile Company.....	Kokomo, Ind.
H. C. S.....	H. C. S. Motor Car Company.....	Indianapolis, Ind.
Holmes.....	Holmes Automobile Company.....	Canton, Ohio
Hudson.....	Hudson Motor Car Company.....	Detroit, Mich.
Hupmobile.....	Hupp Motor Car Corporation.....	Detroit, Mich.
Jackson.....	Jackson Motors Corporation.....	Jackson, Mich.

Chamber of Commerce, Inc.

MANUFACTURERS

<i>Trade Name of Car</i>	<i>Members</i>	<i>Address</i>
Jordan.....	Jordan Motor Car Company.....	Cleveland, Ohio
King.....	King Motor Car Company.....	Detroit, Mich.
Kissel Kar.....	Kissel Motor Car Company.....	Hartford, Wis.
Kline Kar.....	Kline Car Corporation.....	Richmond, Va.
Lafayette.....	Lafayette Motors Company.....	Indianapolis, Ind.
Lexington.....	Lexington Motor Company.....	Connersville, Ind.
Liberty.....	Liberty Motor Car Company.....	Detroit, Mich.
Lincoln.....	Lincoln Motor Company.....	Detroit, Mich.
Locomobile.....	Locomobile Company.....	Bridgeport, Conn.
McFarlan.....	McFarlan Motor Corp.....	Connersville, Ind.
Maibohm.....	Maibohm Motors Company.....	Sandusky, Ohio
Marmon.....	Nordyke & Marmon Company.....	Indianapolis, Ind.
Maxwell.....	Maxwell Motor Corporation.....	Detroit, Mich.
Mercer.....	Mercer Motors Company.....	Trenton, N. J.
Milburn Electric.....	Milburn Wagon Company.....	Toledo, Ohio.
Mitchell.....	Mitchell Motors Company.....	Racine, Wis.
Moon.....	Moon Motor Car Company.....	St. Louis, Mo.
Nash.....	Nash Motors Company.....	Kenosha, Wis.
National.....	National Motor Car & Vehicle Corp.....	Indianapolis, Ind.
Oakland.....	Oakland Motor Car Company.....	Pontiac, Mich.
Oldsmobile.....	Olds Motor Works.....	Lansing, Mich.
Overland.....	Willys-Overland Company.....	Toledo, Ohio.
Packard.....	Packard Motor Car Company.....	Detroit, Mich.
Paige.....	Paige-Detroit Motor Car Company.....	Detroit, Mich.
Paterson.....	W. A. Paterson Company.....	Flint, Mich.
Peerless.....	Peerless Motor Car Company.....	Cleveland, Ohio.
Piedmont.....	Piedmont Motor Car Company.....	Lynchburg, Va.
Pierce-Arrow.....	Pierce-Arrow Motor Car Company.....	Buffalo, N. Y.
Pilot.....	Pilot Motor Car Company.....	Richmond, Ind.
Premier.....	Premier Motor Corporation.....	Indianapolis, Ind.
Rauch & Lang.....	Rauch & Lang, Inc.....	Chicopee Falls, Mass.
Reo.....	Reo Motor Car Company.....	Lansing, Mich.
Roamer.....	Barley Motor Car Company.....	Kalamazoo, Mich.
R. & V. Knight.....	Root & Vandervoort Eng. Company.....	E. Moline, Ill.
Saxon.....	Saxon Motor Car Corporation.....	Detroit, Mich.
Sayers.....	Sayers & Scovill Company.....	Cincinnati, Ohio.
Standard.....	Standard Steel Car Company.....	Pittsburgh, Pa.
Stearns-Knight.....	F. B. Stearns Company.....	Cleveland, Ohio
Stephens Six.....	Moline Plow Co., Stephens Motor Branch.....	Moline, Ill.

(Continued on following page)

Members of National Automobile Chamber of Commerce, Inc.

(Continued from preceding page)

PASSENGER CAR MANUFACTURERS (Continued)

<i>Trade Name of Car</i>	<i>Members</i>	<i>Address</i>
Stevens-Duryea.....	Stevens-Duryea, Inc.....	Chicopee Falls, Mass.
Studebaker.....	Studebaker Corporation.....	South Bend, Ind.
Stutz.....	Stutz Motor Car Company of America.....	Indianapolis, Ind.
Templar.....	Templar Motors Company.....	Cleveland, Ohio
Velie.....	Velie Motors Corporation.....	Moline, Ill.
Westcott.....	Westcott Motor Car Company.....	Springfield, Ohio
Willys-Knight.....	Willys-Overland Company.....	Toledo, Ohio
Winton.....	The Winton Company.....	Cleveland, Ohio
Wills-St. Claire.....	C. H. Wills & Company.....	Marysville, Mich.

MOTOR TRUCK MANUFACTURERS

<i>Trade Name of Truck</i>	<i>Members</i>	<i>Address</i>
Acme.....	Acme Motor Truck Company.....	Cadillac, Mich.
Am. La France.....	American La France Fire Engine Co.....	Elmira, N. Y.
Atterbury.....	Atterbury Motor Car Company.....	Buffalo, N. Y.
Autocar.....	Autocar Company.....	Ardmore, Pa.
Brockway.....	Brockway Motor Truck Company.....	Cortland, N. Y.
Buick.....	Buick Motor Company.....	Flint, Mich.
Chevrolet.....	Chevrolet Motor Company.....	Detroit, Mich.
Clydesdale.....	Clydesdale Motor Truck Company.....	Clyde, Ohio
Commerce.....	Commerce Motor Car Company.....	Detroit, Mich.
Corbitt.....	Corbitt Motor Truck Company.....	Henderson, N. C.
Cunningham.....	Jas. Cunningham Son & Company.....	Rochester, N. Y.
Denby.....	Denby Motor Truck Company.....	Detroit, Mich.
Diamond T.....	Diamond T Motor Car Company.....	Chicago, Ill.
Dodge Brothers.....	Dodge Brothers.....	Detroit, Mich.
Dorris.....	Dorris Motor Car Company.....	St. Louis, Mo.
Duplex.....	Duplex Truck Company.....	Lansing, Mich.
Earl.....	Earl Motors, Inc.....	Jackson, Mich.
Federal.....	Federal Motor Truck Company.....	Detroit, Mich.
Garford.....	Garford Motor Truck Company.....	Lima, Ohio
G. M. C.....	General Motors Truck Company.....	Pontiac, Mich.
Graham.....	Graham Brothers.....	Evansville, Ind.
International.....	International Harvester Company.....	Chicago, Ill.
Jackson.....	Jackson Motors Corporation.....	Jackson, Mich.
Kelly-Springfield.....	Kelly-Springfield Motor Truck Co.....	Springfield, Ohio
Kissel.....	Kissel Motor Car Company.....	Hartford, Wis.
Kleiber.....	Kleiber & Company.....	San Francisco, Cal.
Maccar.....	Maccar Truck Company.....	Scranton, Pa.

<i>Trade Name of Truck</i>	<i>Members</i>	<i>Address</i>
Mack.....	Mack Bros. Motor Car Company.....	New York, N. Y. (Factory, Allentown, Pa.)
Maxwell.....	Maxwell Motor Corporation.....	Detroit, Mich.
Milburn Electric....	Milburn Wagon Company.....	Toledo, Ohio
Moreland.....	Moreland Motor Truck Company.....	Los Angeles, Cal.
Nash.....	Nash Motors Company.....	Kenosha, Wis.
Old Hickory.....	Kentucky Wagon Mfg. Company.....	Louisville, Ky.
Oldsmobile.....	Olds Motor Works.....	Lansing, Mich.
Oneida.....	Oneida Motor Truck Company.....	Green Bay, Wis.
Packard.....	Packard Motor Car Company.....	Detroit, Mich.
Paige.....	Paige-Detroit Motor Car Company.....	Detroit, Mich.
Pierce-Arrow.....	Pierce-Arrow Motor Car Company.....	Buffalo, N. Y.
Rainier.....	Rainier Motor Corporation.....	Flushing, N. Y.
Reo.....	Reo Motor Car Company.....	Lansing, Mich.
Republic.....	Republic Motor Truck Company.....	Alma, Mich.
Riker.....	Locomobile Company.....	Bridgeport, Conn.
Rowe.....	Rowe Motor Manufacturing Company.....	Lancaster, Pa.
Sanford.....	Sanford Motor Truck Company.....	Syracuse, N. Y.
Sayers.....	Sayers & Scoville Company.....	Cincinnati, Ohio
Schacht.....	G. A. Schacht Motor Truck Company.....	Cincinnati, Ohio
Selden.....	Selden Truck Corporation.....	Rochester, N. Y.
Service.....	Service Motor Truck Company.....	Wabash, Ind.
Standard.....	Standard Motor Truck Company.....	Detroit, Mich.
Sterling.....	Sterling Motor Truck Company.....	Milwaukee, Wis.
Stewart.....	Stewart Motor Corporation.....	Buffalo, N. Y.
Traylor.....	Traylor Eng. and Mfg. Company.....	Cornwells Heights, Pa.
United.....	United Motors Company.....	Grand Rapids, Mich.
Velie.....	Velie Motors Corporation.....	Moline, Ill.
Vim.....	Vim Motor Truck Company.....	Philadelphia, Pa.
Walter.....	Walter Motor Truck Company.....	New York, N. Y.
Ward.....	Ward Motor Vehicle Company.....	Mt. Vernon, N. Y.
White.....	White Motor Company.....	Cleveland, Ohio
Wilson.....	J. C. Wilson Company.....	Detroit, Mich.
Yellow.....	Yellow Cab Mfg. Company.....	Chicago, Ill.

GENERAL MOTORS CORPORATION, Detroit, Mich., controls:

Buick Motor Company	General Motors Truck Company
Cadillac Motor Car Company	Olds Motor Works
Chevrolet Motor Company	Oakland Motor Car Company

INTERNATIONAL MOTOR COMPANY, New York, N. Y., controls:

Mack Bros. Motor Car Company

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